National Aeronautics and Space Administration


# Enterprise Service Desk Requirements Document (ESD 1.0 & 1.1)

August 1, 2011

Prepared by:

Paul J. Rydeen
ESD Project Manager

8/17/11
Date

Approved by:

James A. Walker, Jr.
NSSC Deputy CIO / ESD Service Office Manager

8/17/11
Date

Approved by:

Saurabh Baveja
ESD Service Executive

8/17/11
Date

<Table of Contents>

## List of Figures

## List of Tables

**0 : Change Log**

| Revision No. | Description | Revised By | Revision Date | Filename |
|---|---|---|---|---|
| 1 | Basic. | J. Sprague | 8/17/09 | ESD Requirements Document.doc |
| 2 | Added Level 3 Requirements and Appendices; additional edits throughout. | P. Rydeen | 9/2/09 | ESD ESRS Requirements Document v1.0.docx |
| 3 | Minor edits. | J. Sprague | 9/3/09 | ESD ESRS Requirements Document v1.1.docx |
| 4 | Edits due to feedback. | J. Sprague / P. Rydeen | 9/4/09 | ESD ESRS Requirements Document v1.4.docx |
| 5 | Added Level 4 requirements and Appendix B. | T. Jackson / P. Rydeen | 9/11/09 | ESD ESRS Requirements Document v2.1.docx |
| 6 | Level 4 requirements for section 5, Appendix A, minor edits. | P. Rydeen | 9/14/09 | ESD ESRS Requirements Document v2.2.docx |
| 7 | Added requirement 5.6, other minor edits. | P. Rydeen | 9/16/09 | ESD ESRS Requirements Document v2.3.docx |
| 8 | In response to ITMB, PE, PDT, and Center review comments; added cover sheet. | P. Rydeen | 10/6/09 | ESD ESRS Requirements Document v2.4.docx |
| 9 | PDR Follow-up. | P. Rydeen | 11/2/09 | ESD ESRS Requirements Document v2.5.docx |
| 10 | Baseline document for KDP C. | P. Rydeen | 1/22/10 | ESD ESRS Requirements Document v2.6.docx |
| 11 | Per Jackie Gill's review. | P. Rydeen | 2/1/10 | ESD ESRS Requirements Document v2.7.docx |
| 12 | Per Jackie Gill's review. | P. Rydeen | 2/24/10 | ESD ESRS Requirements Document v2.8.docx |
| 13 | "Cradle" update | P. Rydeen | 6/9/10 | ESD ESRS Requirements Document v2.9.docx |
| 14 | Rebaseline for dCDR2 | T. Patman / P. Rydeen | 4/25/11 | ESD Requirements Document v3.0.docx |
| 15 | Added Section 3 for Candidate Requirements; updated text in doc sections and appendices post-dCDR2. | P. Rydeen | 5/20/11 | ESD Requirements Document v3.1.docx |
| 16 | Update for ESD 1.1. | P. Rydeen | 8/1/11 | ESD Requirements Document |

| | | | | |
|---|---|---|---|---|
| | CDR/TRR. | | | v3.2.docx |

# 1 Introduction

## 1.1 Project Overview

The Enterprise Service Desk (ESD) is a foundational component of NASA's IT Infrastructure Integration Program's (I3P) strategy for delivery of core IT infrastructure services. The ESD will provide Tier 0 and Tier 1 support for a multiple set of services to be provided to NASA through the implementation of five Agency Office of the Chief Information Officer (OCIO) IT services contracts. These I3P support contracts are sponsored out of the Enterprise Services and Integration Division (ES&I) of the NASA OCIO.

The ESD will be managed by the NASA Shared Services Center (NSSC). The Service Provider (SP) will provide technical support services under the contract management of the NSSC. Tier 2 services will be provided by the I3P Contractors. The I3P contracts are identified as Agency Consolidated End User Services (ACES), NASA Integrated Communications Services (NICS), Enterprise Applications Service Technologies (EAST) and Web Enterprise Service Technologies (WEST).

The ESD strategy is to utilize to the greatest extent possible a Commercial Off-The-Shelf (COTS) industry-standard set of software tools for managing workflow and providing service performance metrics monitoring and reporting capabilities to the NASA IT organization. The selected package is the Information Technology Service Management (ITSM) suite of software modules commonly known as Remedy. The targeted version for deployment within the ESD is Remedy 7.5. An additional module providing Service Request Management functions will be developed and released as the NASA Enterprise Service Request System (ESRS). The Action Request System (ARS) is the ticketing component of Remedy. Atrium is the Configuration Management Database (CMDB) component of Remedy.

The ITSM software tools are designed to be aligned with the Information Technology Infrastructure Library (ITIL) framework. ITIL is a framework for IT Management structured around a set of industry best known practices for IT processes and procedures. NASA has selected and is implementing the ITIL v3 framework in the I3P environment. The ESD will be implemented in three phases: • Phase 1: o Consolidate, establish, and provide Tier 1 service desk functions currently performed by the Outsourcing Desktop Initiative for NASA (ODIN) and NASA Information Systems Center (NISC) help desks as these contracts end and/or are replaced by the I3P contracts. o Establish a Tier 0 Self-Service web service for end user status inquiries, system status, FAQs, and provide access to a knowledge database for known customer Incidents, Problem resolutions, and workarounds. o Provide the OCIO ES&I Service Integration Management (SIM) office performance monitoring and management activities for the ESD related to Incident management, Problem management, and change requests, ESD Service Level Agreement (SLA) management, SLA analysis and reporting from the ESD Remedy system, CMDB, configuration management support and service continuity management. o Establish a core ordering capability for I3P services defined in the

Enterprise Service Catalog (ESC). • Phase 2: (expected as center contracts end throughout FY12) o Implement ESD capabilities to transition Center help desk functions to the NSSC as Centers transition from local Center IT contracts to the agency-wide I3P contracts. o Provide support for Centers to utilize the ESRS for Center IT services in addition to Agency I3P services. • Phase 3: (expected FY12 and beyond) o Add ESD/ESRS support for non-I3P services (e.g. Center facilities services) and/or non-Center services such as those provided by Headquarters (HQ), the NASA Enterprise Applications Competency Center (NEACC), etc.

**1.2 System Overview**

The system is based on an ITSM-aligned service philosophy, where the primary focus is the end-user/customer's perspective of the services provided by the OCIO infrastructure support organizations. To achieve the ITSM vision, NASA is employing an ITIL-aligned process framework. This standard framework will allow consistent and effective operations between disparate organizations and providers by defining a common set of operating parameters that all participating parties must use. The ESD Remedy system with web interfaces will provide the primary customer interface for I3P service requests, Incident reporting, and I3P IT infrastructure status reporting.

As previously noted a common ITSM tool has been selected – Remedy. This tool, widely used across the Agency for Help Desk support, meets NASA's I3P ITSM requirements. Remedy provides an ITIL-aligned integrated Incident, Problem, and request management solution. The NSSC's current Remedy implementation is being expanded to also support the service request requirements for customers ordering I3P services and has been upgraded to Remedy 7.5.

To support voice communications, the Enterprise Service Desk will leverage the existing Cisco VOIP and IPCC capabilities. Users will be provided with a toll-free call-in capability and the necessary telecommunications infrastructure will be implemented to support the estimated call volume identified in this document.

The Remedy ITSM suite of products for the Incident Management (IMS) system includes: • Remedy Action Request System (ARS) for ticketing • Remedy Service Request Module (SRM) for the ESRS • Remedy Atrium Configuration Management Database (CMDB) • Remedy Knowledge Management • Remedy Dashboard & Analytics

Additional software includes: • Inquisite for survey support • Centergy/Cisco IPCC for call management statistics • A capacity management application •A workforce management application

**1.3 System Scope**

It is estimated that the I3P environment will initially support 48,000 customers located on-site and near-site to NASA centers and facilities. • 17,500 Civil Servant Employees • 30,500 on-site/near site Contractors

The NSSC will design and implement an ESD that will support 48,000 customers at inception. Additional customers will be taken on as Center help desks transition from local contracts to the ESD.

From an IT support environment perspective the following elements have been identified. All numbers are estimated. • 3,700 IT Employees o 700 Civil Servant Employees o 3,000 Contractors • 4,500 Applications • 8,000 Web Sites o 2,000 Public-

Facing • 48,000 Users Supported (estimated) •80,000 Desktops/Laptops in NASA o 48,000 currently supported by the Outsourcing Desktop Initiative for NASA (ODIN) contract o 38,000 supported by non-ODIN Center/Mission Directorate contracts • 15,000 Servers in 75 Data Centers • 3 Wide Area Networks • 14 Center-specific Local Area Networks • 200 Connections to Universities and Partners • 8,000 mobile computing devices (PDAs, BlackBerries, etc.) • 57,000 E-mail Accounts • 530,000 E-mail Messages Delivered Per Day

For those services within the I3P scope, the following ESD Tier-level responsibilities are defined:

- Tier 0: Self-service support using Knowledge Base (KB), FAQs, etc, provided by I3P contractors and gained by the SP's experience.
- Tier 1: Telephone and e-mail communications, as well as self-entry via the Tier 0 site. Primary focus is to return the customer to production status. Secondary is to collect information for Incident Reporting (support provided via non-dispatched technicians).
- Tier 2: Remote control assistance (a technician provides assistance remotely), desk-side assistance (a technician is dispatched to the customer's work site, e.g., blue screen, printer jam, network issues, or software or hardware issues) and computer lab support.
- Tier 3: Specialized technical support (behind the scenes services), usually by a vendor.

Tier 0 and Tier 1 support for the I3P contracts and for the Enterprise Service Request System (ESRS) will be provided by the ESD. The ESD will additionally provide Service Integration Management support to the OCIO ES&I SIM office through the reporting capabilities of the Remedy system and customer surveys. This includes data for Tiers 0 through 2, including current data as well as historical records.

### 1.4 Assumptions and Contraints

• The Enterprise Service Desk will leverage existing Agency assets and capabilities already established at the NSSC and agency-wide, and with as-yet unidentified systems to be determined after the five I3P contracts are awarded. • The Enterprise Service Desk shall be implemented in phases. Initially the ESD will replace the Tier 1 services/functions being provided by the current ODIN and NISC help desks. In the future, other Center-specific help desk functions will be integrated into the Enterprise Service Desk. • The Enterprise Service Desk shall minimize disruption to end-user services during the transition from current Help Desks to the ESD. • The Enterprise Service Desk initially shall provide Tier 0/1 services for specific services being offered in the NASA Enterprise Service Catalog, and supported under the ACES, NICS, EAST and WEST NASA OCIO Agency contracts. • The user community is identified as those NASA employees and NASA support contractors utilizing I3P services. • All Incidents shall route through the Enterprise Service Desk and its service management tool, the Remedy ITSM system. • The official system of record for all ESD and I3P services is the ESD Remedy ITSM system. • All Incidents, Problems, change, and service requests to the ESD and I3P contractors shall require a Remedy ITSM ticket be created and updated with all relevant data from creation to closure of the request. •The ESD will enable and support automatic routing of trouble / request tickets via the Remedy ITSM system and the ESRS module. • Constraints are conditions outside the control of the project that limit the design alternatives. The following are examples of constraints: o

The Enterprise Service Desk shall adhere to all NASA IT policies. o The Enterprise Service Desk shall utilize the NSSC's SP for Tier 2 support of its own internal systems located at the NASA Shared Services Center. As the I3P Service contracts are awarded and the new I3P vendors are transitioned into the NASA operational environment to provide services, the NSSC's SP shall establish and implement transition plans from their existing service provider(s) to the I3P contractor's respective service offerings.

### 1.5 References

| REFERENCES | DOCUMENT TITLE | DOCUMENT NUMBER |
|---|---|---|
| 1. | ESD Concept of Operations (CONOPS) | Signed version dated 9 Nov 2010 |
| 2. | ESD Formulation Authorization Document (FAD) | Final version signed 17 Jul 2009 |
| 3. | ESD Project Plan | Final version signed 24 Jun 2010 |
| 4. | ESD Interface Definition Specification (IDS) | NSSWI-1280-0105 IT ESD IDS dated 18 July 2011 |
| 5. | NEAR Interface Definition Specification (IDS) | v.08 dated 10 Jul 2009 |
| 6. | NASA ITIL v3 Functional Roles and RACI Model for I3P | Final version dated Dec.15, 2009 |

**Table 1**

## 2 Requirements

This section contains the active requirements for ESD 1.0 and subsequent releases. Requirements in this section are marked ACCEPTED in Cradle and have been formally transmitted to the NSSC Service Provider by the Contracting Officer. Candidate Requirements appear in Section 3 of this document.

[R.1.2.1] **PWS-001**

Provide a Single Point of Contact (SPOC) for initial reporting of incidents related to I3P services

[R.1.2.1.1] **PWS-002**

Provide the capability for Incidents to be collected via calls, e-mail, or web form. (Customers may submit supplemental information via fax.)

[R.1.2.1.2] **PWS-003**

Route incidents to the I3P Contract according to information provided by the customer and initiate resolution processes as per defined Information Technology Infrastructure Library (ITIL) processes. For those Incidents reported that are not part of the I3P services, provide phone number of the appropriate organizations to the customer

[R.1.2.2] **PWS-004**

Provide 24x7 operations

[R.1.2.2.1] **PWS-005**

Ensure staffing is in place for 24x7 capability for Incident Management and I3P infrastructure status/notice capabilities at full Customer Go-Live date.

[R.1.2.2.1.1] **PWS-006**

Staffing will be based on workload data provided by the government. Customer base is set at 48,000 Authorized Users ("Authorized Users" are users authorized by NASA to use any of the I3P contractor services).

[R.1.2.2.2] **PWS-007**

Ensure that ESD/ESRS IT infrastructure and operations processes have the ability to support 24x7 operations beginning at full Customer Go-Live date.

[R.1.2.3] **PWS-008**

Process incidents/problems as per defined SLI's

[R.1.2.3.1] **PWS-009**

Log all Incidents into the Incident Management System (IMS)

[R.1.2.3.2] **PWS-010**

Attempt first call resolution for those incidents where TIER 1 agents:

Have access to applications for password resets.

Have access to support user id recovery.

Have access to defined application errors where resolution steps are defined.

[R.1.2.3.3] **PWS-014**

Escalate incidents as per defined business rules for Severity Levels 1-3.

[R.1.2.3.3.1] **PWS-015**

Track incidents/Problems transferred to TIER 2.

[R.1.2.3.3.2] **PWS-016**

ESD has ownership for communication and statusing of all Incidents for all I3P services. In the event resolution of an incident requires involvement of multiple I3P contractors, the ESD will route (and subsequently status) the incident to each I3P contractor.

[R.1.2.3.4] **PWS-017**

Close all incidents after notification of resolution from TIER 2 provider of resolution.

[R.1.2.4] **PWS-018**

Establish and maintain an Incident Management System (IMS)

[R.1.2.4.1] **PWS-019**

Procure and maintain the required IT systems and software to support the core IMS (Remedy 7.x).

[R.1.2.4.2] **PWS-020**

Ensure that data is backed up and protected per NPR 2810.1, Security of Information Technology; NPD 1440.6H, NASA Records Management; and NPR 1382.1, NASA Privacy Procedural Requirements.

[R.1.2.4.3] **PWS-021**

Identify, procure, and deploy licenses for customer/I3P contractor usage and government support teams.

[R.1.2.5] **PWS-022**

Establish interfaces for escalated incidents to I3P and non-I3P Contractors

[R.1.2.5.1] **PWS-023**

Define the data exchange requirements with TIER 2 contractors for Incident assignment and Incident/Problem status reporting (interface build-out is the responsibility of the I3P contractors).

[R.1.2.5.2] **PWS-024**

Coordinate with the Security Operations Center (SOC) for ESD/ESRS related IT Security incidents.

[R.1.2.5.3] **PWS-025**

Provide non-I3P  contact information to customer

[R.1.2.6] **PWS-026**

Collect and report SLI-based performance metrics

[R.1.2.6.1] **PWS-027**

Establish a data repository to collect Incident status changes.

[R.1.2.6.2] **PWS-028**

Develop reports providing metrics for ESD / ESRS SLI compliance, performance and quality of service.

[R.1.2.6.3] **PWS-029**

Conduct Issue and process surveys as per a defined statistical sampling for Incident/Problem resolution and closures related to I3P service status/availability.  In most cases the expected sampling base is 90% confidence interval and 5% margin of error.

[R.1.2.7] **PWS-030**

Manage communications for I3P services

[R.1.2.7.1] **PWS-031**

Provide planned/unplanned outage status to customers via TIER 0 and Notification system

[R.1.2.7.2] **PWS-032**

Provide customer notifications of upgrades to I3P services via TIER 0 and Notification system.

[R.1.2.7.3] **PWS-033**

Ensure timely updates to the TIER 0 web service for I3P service status/availability.

[R.1.2.8] **PWS-034**

Provide for Continuity of Operations

[R.1.2.8.1] **PWS-035**

Work with NASA to establish and maintain an IT architecture to support sustained operations.

[R.1.2.8.2] **PWS-036**

Develop contingency plans (including updating the Business Continuity Plan) addressing SLI performance risks.

[R.1.2.9] **PWS-037**

Establish and maintain a TIER 0 I3P Self-Service Capability

[R.1.2.9.1] **PWS-038**

Implement and maintain a knowledge base for user inquiries and help concerning commonly asked / requested services (to be provided by I3P contractors, and by the SP based on experience).

[R.1.2.9.2] **PWS-039**

Establish the TIER 0 Self-Service Capability by ESD/ESRS Internal Go-Live

[R.1.2.9.3] **PWS-040**

Provide for 24x7 availability at full Customer Go-Live date.

[R.1.2.9.4] **PWS-041**

Provide for automated and current Incident / Problem statusing using TIER 0.

[R.1.2.9.5] **PWS-042**

Utilize web services technology leveraging IMS capabilities and knowledge articles from existing knowledge bases as provided by the I3P contractors, ODIN and NISC.

[R.1.2.10] **PWS-043**

Establish and maintain the Enterprise Service Request System (ESRS)

[R.1.2.10.1] **PWS-044**

Provide routing of Enterprise Service Requests to TIER 2 fulfilment.

[R.1.2.10.2] **PWS-045**

Provide TIER 0 and TIER 1 help and support for customers using the ESRS.

[R.1.2.10.3] **PWS-046**

Integrate the ESRS into the TIER 0 self-service design, and provide TIER 1 support for ESRS issues that can't be resolved via the self-service web services.

[R.2.1.1] **PWS-047**

(DRD 3.8.3-2 ) The SP shall develop and maintain operations documentation including training documentation and user manuals for Authorized Users. Authorized users are those employees and contractors within IDMAX. The customer base is estimated to be 48,000 personnel. (Work is underway with the OCIO to identify I3P users in IDMAX to match the agency's official workforce estimates.)

[R.2.1.2] **PWS-048**

(DRD 3.8.3-1) The SP shall, in accordance with the accepted governance plan, support monthly operational reviews with the NSSC and highlight opportunities where ESD/ESRS process improvements could be made to improve service levels, achieve cost efficiencies or provide other benefits related to Enterprise Service Desk operations consistent with NASA business objectives.The SP shall ensure that the Enterprise Service Desk operations comply with NASA's privacy policy, applicable privacy laws and legislative requirements.

[R.2.1.3] **PWS-049**

The SP shall be responsible for managing and training the staff required to provide Enterprise Service Desk services.

[R.2.1.4] **PWS-050**

The SP shall maintain staffing levels to support the Agency and meet the SLIs, including consideration of peak volume periods caused by Authorized User population imbalances, across time zones and normal busy periods. This may involve increasing or decreasing staffing levels as appropriate.

[R.2.1.5] **PWS-051**

(DRD 3.8.3-2) The SP shall provide support for the Business Continuity for ESD and ESRS services, including modify the existing NSSC Business Continuity Plan to include the ESD/ESRS.

[R.2.1.6] **PWS-052**

The SP shall adhere to all NASA standards regarding IT security and protection of Personally Identifiable Information (PII). See reference section for policy numbers.

[R.2.1.7] **PWS-053**

The SP shall adhere to NASA Service Level Management (SLM) policies as described in the Cross-Functional Performance Work Statement (CF-PWS) for all applications operations and implementation activities. SLM policies include the assignment and review of Severity Levels for incoming service requests, the implementation of action plans in the event of lagging SP performance, and proactive communication mechanisms

to inform the NSSC of any issues associated with Service Level performance. (Severity Levels are currently shown as 1, 2, and 3 in Technical Exhibit 2. The SP shall adjust reporting requirements to meet the final Severity Level definitions.)

[R.2.2.1.1.1] **PWS-056**

TIER 1 Incident Management (WBS 3.8.3.1). Contacts will be received by the ESD and categorized as incidents or requests for services. All incident requests will be initially collected and processed by the TIER 1 Service Desk. Request for services will be processed using the ESRS. For contacts identified as incidents, TIER 1 Service Desk specialists are responsible for validating the requestor's identity and triaging the incident by analyzing the symptoms. Triaging involves first trying to resolve the incident at the TIER 1 Service Desk, and when required escalating the incident to the appropriate TIER 2 I3P contractor. SLIs are established related to First Call Resolution goals by the TIER 1 ESD. The TIER 1 Service Desk will not utilize remote control to change the customer's desktop configuration. However, the TIER 1 ESD specialist may have access to Enterprise Applications for password/user id resets. Specific requirements include:

[R.2.2.1.1.2] **PWS-057**

The SP shall provide a Single Point of Contact for I3P customers for submission of incidents. These interfaces are defined as telephone and web services. (Customers may submit supplemental information via fax.) The majority of incidents will be submitted via telephone calls to a Service Desk specialist.

[R.2.2.1.1.3] **PWS-058**

The SP shall operate the ESD to be compliant with all applicable NASA standards (including NSSC policies and procedures).

[R.2.2.1.1.4] **PWS-059**

The SP shall provide staffing:

Beginning at full customer Go-Live date to support a 24x7 operation capable of handling the estimated call volumes stated in Technical Exhibit 1.

Trained and possessing the general knowledge to use Remedy Knowledge Base for Incident resolution and routing based on the information provided by the customer.

[R.2.2.1.1.6] **PWS-063**

The SP shall ensure that all Incidents are fully logged, date/time stamped with required fields (CIs) as provided by the customer. This data shall be entered into the Incident Management System at the time of the call/incident report.

[R.2.2.1.1.7] **PWS-064**

The SP shall allocate suitable Incident categorization coding so that the Incident type is properly recorded.

[R.2.2.1.1.8] **PWS-065**

The SP shall assign the appropriate prioritization/severity level as per documented escalation procedures.

[R.2.2.1.1.9] **PWS-066**

The SP shall process the incident based on documented prioritization and severity levels assigned.

[R.2.2.1.1.10] **PWS-067**

The SP shall process calls based on available knowledge materials and time constraints and route to the appropriate TIER 2 contractor when not resolved at TIER 1. Knowledge materials may be approved scripts, knowledge database entries, desk-guides, work-around procedures.

[R.2.2.1.1.11] **PWS-068**

The SP shall meet all SLIs related to TIER 1 Service Desk operations.

[R.2.2.1.1.12] **PWS-069**

Customers may use TIER 0 to status incidents. The SP shall be responsible for closing all Incidents / Problems.

[R.2.2.1.1.13] **PWS-070**

The SP shall provide a Single Point of Contact for all Incidents reported for I3P IT Infrastructure services.

[R.2.2.1.1.14] **PWS-071**

The SP will participate in cross-functional teams that may be activated for problem resolution coordination. The ESD will act as a participant in a similar role as the other I3P contractors. The ESD will not lead the Problem resolution team.

[R.2.2.1.3.1] **PWS-073**

The SP shall support and maintain a TIER 0 Self-Service web service which Authorized Users will access via the existing NSSC Customer Service Web Site.

[R.2.2.1.3.2] **PWS-074**

The SP shall provide I3P customers self-help, including the posting of I3P Known Error information and "how to" information relating to supported services (to be provided by the I3P contractors).

[R.2.2.1.3.3] **PWS-075**

The SP shall use web-based, NASA-approved existing technologies for supporting users and sharing knowledge of I3P services.

[R.2.2.1.3.4] **PWS-076**

The SP shall implement NSSC approved web services capable of providing customers with a self-service interface in order to obtain information related to:a. Incidents.

b. Status of I3P services.

c. Access to the knowledge base for FAQs.

d. Common IT information requests, e.g. questions related to software use, and application access, password resets, etc.

e. I3P Incident/Problem status tracking information.

f. I3P knowledge base access.

g. I3P password reset services (if system access is provided) .

[R.2.2.1.3.5] **PWS-077**

The SP will implement continuous improvement process for knowledge base and web services for ESD/ESRS.The SP shall be responsible for utilizing I3P contractor-provided scripts and knowledge base articles to address issues and support customers for repetitive problems identified at the TIER 2 level.

[R.2.2.1.3.6] **PWS-078**

The SP shall be responsible for implementing and maintaining ESD dashboards.

[R.2.2.1.3.7] **PWS-079**

The SP shall provide recommendations to the NSSC for TIER 0 opportunities and initiatives based on lessons learned in TIER 0 operations.

[R.2.2.1.3.8] **PWS-080**

The SP shall implement Continuous Service Improvement processes specifically targeted at migrating TIER 1 Service Desk calls to a TIER 0 Self Service environment

[R.2.2.2] **PWS-081**

ESD/ESRS Support Systems Management (WBS 3.8.3.2) ESD/ESRS Support Systems Management identifies the SP's responsibilities associated with managing the systems required to support operations of the ESD and the ESRS.

The SP will be responsible for providing systems management for the following anticipated systems:

Remedy 7.x ITSM Suite for the Incident Management System.

Remedy 7.x ITSM Suite for the Service Request System.

Centergy for the CISCO IPCC backup system.

ATRIUM CMDB (Remedy 7.x) for the Data Repository / Configuration Database.

Existing NSSC Web Services infrastructure for the TIER 0 Self Service Web Service.

Remedy knowledge database for the Knowledge Management Database.

All hardware servers and communications infrastructure required to support ESD operations as per defined SLIs.

Activity and Outage Posting and Notification System (AOPNS) message dissemination currently in use at the NISC. The SP will investigate hosting AOPNS at the NSSC vs. implementing a new communications and notifications system, and will make a recommendation for NSSC approval prior to implementation of either approach.

The SP shall be responsible for the following system management activities for the systems identified above

[R.2.2.2.1] **PWS-092**

The SP shall provide application functional support knowledge for all systems defined above. This shall include knowledge of application functional configuration, functional integration of applications and the skills and abilities required to analyze and troubleshoot problems and inconsistencies within each application.

[R.2.2.2.2] **PWS-093**

The SP shall operate and make available all systems as per defined SLIs.

[R.2.2.2.3] **PWS-094**

The SP shall utilize a configuration management process to manage all applications and system changes to ESD and ESRS support systems.

[R.2.2.2.4] **PWS-095**

The SP shall provide security planning in accordance with NASA policies.

[R.2.2.2.5] **PWS-096**

The SP shall apply critical software updates and patches to all software components for each application. Critical software updates include security updates, updates required to maintain vendor support and updates required for operational stability.

[R.2.2.2.6] **PWS-097**

The SP shall provide a comprehensive governance, risk and compliance program, leveraging existing NSSC management tools, to address evolving security guidance, proactive response to internal / external assessments, routine security planning, and vulnerability assessments

[R.2.2.2.7] **PWS-098**

The SP shall, as part of the security program, manage routine assessments of security to include, privacy assessments, vulnerability assessments, social engineering assessments, segregation of duties assessments, security plan assessments, business resiliency tabletops, business resiliency exercises, and routine reviews of lifecycle improvements to ensure system confidentiality, integrity and availability.

[R.2.2.2.8] **PWS-099**

The SP shall provide a business resiliency capability that includes Business Continuity, cyber incident response planning.

[R.2.2.2.9] **PWS-100**

The SP shall support internal / external audits and assessments for both routine and ad hoc reviews through the use of automated queries.

[R.2.2.2.10] **PWS-101**

The SP shall collect and provide all performance metrics for ESD and ESRS support systems in accordance with Service Level Performance Measures.

[R.2.2.2.11] **PWS-102**

The SP shall prepare, implement, and maintain a Capacity Management plan in accordance with NASA's Capacity Management Process.

[R.2.2.2.12] **PWS-103**

The SP shall coordinate with the NSSC on an on-going basis to accurately project the capacity available for upcoming releases.

[R.2.2.2.13] **PWS-104**

The SP shall utilize historical reference points related to capacity and work through-put to ensure accurate capacity projections.

[R.2.2.2.14] **PWS-105**

The SP shall work with the NSSC to ensure NSSC licensing compliance for Remedy.

[R.2.2.2.15] **PWS-106**

The SP shall work with the NSSC to monitor and manage adequate storage requirements for all users.

[R.2.2.2.16] **PWS-107**

(DRD 3.8.3-2) The SP shall prepare, implement and maintain, for NSSC approval, a Release Management plan, in accordance with NASA's Release and Deployment Management Process. The SP's Release Management plan shall define release schedules and procedures, rules of engagement for the usage of systems across the system landscapes and an NSSC-approved back-out plan.

[R.2.2.2.17] **PWS-108**

The SP shall utilize network, computing, storage and business continuity services from NICS and the NEDC at the direction of the NSSC.

[R.2.2.2.19] **PWS-110**

The SP shall manage the transition of all new infrastructure components into an operational state for the ESD/ESRS.

[R.2.2.2.20] **PWS-111**

The SP shall operate and maintain electronic interfaces for the ESD and ESRS with the NEAR, I3P contractors (incidents, problems and fulfillment) and interfaces needed for Remedy foundation data.

[R.2.2.2.21] **PWS-112**

The SP shall monitor messages for abnormal terminations, notify and record the problem to the respective NASA application owners and provide logs to vendors to support problem resolution for the ESD/ESRS applications and systems.

[R.2.2.2.22] **PWS-113**

The SP shall provide Account Management functions for all ESD applications to include:

a. Account Set-Up

b. Password Reset

c. Account Deletion

[R.2.2.3.1] **PWS-114**

Service Communications and Notifications (WBS 3.8.3.3) The Enterprise Service Desk will be the primary interface to customers for dissemination of informational notices to the I3P customer community. Current examples of these notices include: • AOPNS • NOMAD • NEACC notification • NISN • ODIN Outreach (See Appendix 1 for definitions.) Messages may be widely disseminated or targeted to a specific customer base. Content for the disseminated message is the responsibility of the sending I3P Contractor. As a part of I3P Service Communications and Notification, the following requirements are hereby established:

[R.2.2.3.1.1] **PWS-115**

The SP shall establish the capability to disseminate notices of planned/unplanned outages.

[R.2.2.3.1.3] **PWS-117**

The SP shall disseminate messages to I3P users through: o E-mail. o TIER 0 Web Services. o AOPNS or suitable alternative

[R.2.2.3.1.5] **PWS-119**

The SP shall develop and maintain a system for management of applicable messages, including: • Performing communications Quality Assurance. • Dissemination based on the message priority.

[R.2.2.3.1.6] **PWS-120**

The SP shall provide access to NASA's hosted message distribution database (AOPNS or suitable alternative)

[R.2.2.3.1.7] **PWS-121**

The SP shall inform the NSSC of abnormal spikes of Incidents or Problems based on information obtained from: • Authorized User contact. • New Incidents. • Call volume spikes.

[R.2.2.3.1.8] **PWS-122**

The SP shall disseminate information about the I3P Service environment via the TIER 0 web site including: • Schedules of changes to the I3P services. • New I3P services. • I3P service training materials. • I3P user guides. • Knowledge Article search capability.

[R.2.2.3.1.9] **PWS-123**

The SP shall broadcast known I3P service disruption information as provided by the I3P contractors

[R.2.2.3.1.10] **PWS-124**

The SP shall provide an electronic communication method for I3P customers to be delivered information to users at least three times before a major scheduled event occurs.

[R.2.2.3.1.11] **PWS-125**

The timing of the communications may vary, but unless otherwise directed by the NSSC, these communications will occur: • Once seventy-two (72) hours prior to the event. • Once twenty-four (24) hours prior to the event. • Once eight (8) hours prior to the event.

[R.2.2.3.2] **PWS-126**

The SP will be responsible for managing the ESD/ESRS CIs and ensuring that CI data is returned from the I3P TIER 2 to the CMDB.

[R.2.2.3.2.1] **PWS-127**

The SP shall identify and maintain ESD/ESRS-specific CI information details in accordance with NASA's SACM process.

[R.2.2.3.2.2] **PWS-128**

The SP shall maintain changes to ESD/ESRS-specific CI information details in accordance with NASA's Change Management process.

[R.2.2.3.2.3] **PWS-129**

The SP shall report all ESD/ESRS-specific CI inconsistencies to the NSSC.

[R.2.2.3.3] **PWS-130**

Continuous Service Improvement (CSI) creates and manages a structured approach for ongoing improvements to services and processes. NASA requires CSI to be a part of every process, with the SP prepared to improve quality in incremental steps by understanding the overall service vision of NASA, and to use that vision in order to achieve the desired improvement(s).

NASA anticipates attaining value from CSI in the form of:

a. Increased sharing of services among all NASA Centers.

b. Cost advantage over multiple decentralized help desks.

c. Increased return-on-investment (ROI) for all services.

d. Increased value-on-investment (VOI) for all services.

[R.2.2.3.3.1] **PWS-132**

The SP shall develop and implement a NASA-approved customer satisfaction scoring mechanism.

[R.2.2.3.3.2] **PWS-133**

The SP shall support the SIM to identify process improvements for the Enterprise Service Desk. The SP will provide these for the monthly operational reviews mentioned in section 3.1.

[R.2.2.3.4] **PWS-134**

Service Performance Analysis and Reporting (WBS 3.8.3.3)The Service Performance Analysis and Reporting function provides information necessary to effectively communicate the status of service provisions to authorized users.The NSSC and the SP will meet within 60 days of this contract modification's award date to finalize the detailed data elements, report formats and review process for the reports listed in Section 4.3, Required Reports Technical Exhibit 3, DRD 3.8.3-1.

[R.2.2.3.4.1] **PWS-135**

The SP shall design, develop, maintain ESD/ESRS performance measures as described by the Data Requirement Documents (DRD's) listed in the Technical Exhibit.

[R.2.2.3.4.2] **PWS-136**

The SP shall support the development of business rules used to address ad hoc query requests. Estimated number of ad hoc reports is one per quarter.

[R.2.2.3.4.3] **PWS-137**

The SP shall allow the NSSC to make changes to these reports via the defined Change Control Process.

[R.2.2.3.4.4] **PWS-138**

The SP shall provide the NSSC an executive summary performance dashboard with information including:

a. SLIs.

b. Key Performance Indicators (KPI's).

c. Client Satisfaction.

[R.2.2.3.4.5] **PWS-139**

The SP shall ensure all performance measures are available via TIER 0.

[R.2.2.3.5.1] **PWS-141**

Develop the systems and processes needed to survey customer satisfaction with the ESD/ESRS and I3P Services. Only I3P data resident in the SP's system shall be included in the I3P portion of the survey.

[R.2.2.3.5.2] **PWS-142**

As directed by the NSSC, develop possible response selections to the survey questions and the expected survey completion rate.

[R.2.2.3.5.3] **PWS-143**

Ensure that CI information related to Incident close-out is updated in the CMDB as provided by the I3P contractor within the Incident.

[R.2.2.3.5.4] **PWS-144**

The SP shall make available to the NSSC, I3P Configuration Items associated with each Incident, Problem or Service Request processed by TIER 2 contractors.

[R.2.3] **PWS-145**

ESRS-Specific Operational Requirements (WBS 3.8.4) The ESRS provides a capability for customers to request I3P services from TIER 1 and TIER 2 contractors.

[R.2.3.1.1] **PWS-146**

The SP shall operate the ESRS in accordance with established NASA processes and procedures. A current list of applicable references is included in Appendix 2.

[R.2.3.1.2] **PWS-147**

The SP shall be responsible for procuring and managing licenses for the ITSM tool. It is anticipated that 48,000 customers will be entering service requests and/or checking status of requests (or incidents).

[R.2.3.1.2.2] **PWS-149**

50 TIER 2 licenses for receipt of ITSM-generated service requests (and incidents) – estimated 10 licenses per I3P contractor.

[R.2.3.1.2.3] **PWS-150**

Server/Back-office license requirements as required.

[R.2.3.1.3] **PWS-151**

The SP shall provide a staff that is trained and knowledgeable on the Remedy 7.x products necessary to initially configure and operate the ESRS.

[R.2.3.1.4] **PWS-152**

The SP shall adhere to requirements defined in section 2.2.2 for those systems directly supporting the ESRS.

[R.2.3.2.1] **PWS-153**

The SP shall ensure that the ESRS is available to customers for ordering as per defined SLIs. Customers are located in various geographic locations across multiple time zones. Estimated customer base is 48,000 comprising both NASA employees and NASA contractors.

[R.2.3.2.2] **PWS-154**

The SP shall provide TIER 0/1 customer support for accessing the ESRS with respect to answering FAQs, inquiries for order status, application errors, issues with access

[R.2.3.2.3] **PWS-155**

The SP shall manage and administer account access and/or role assignments for all users utilizing the ESD/ESRS ITSM tool.

[R.2.3.2.4] **PWS-156**

The SP shall develop and maintain a web-based TIER 0 solution allowing customers to place service and status requests.

[R.2.3.3.3] **PWS-161**

The SP shall provide the capability for users to track and manage requests through the ESD TIER 0 self-service customer interface.

[R.2.3.3.4] **PWS-162**

The SP shall maintain and document interfaces between Remedy 7.x and NEAR, I3P contractors (incidents, problems and fulfillment) and NASA systems for Remedy foundation data to support the workflow and request service.

[R.2.3.3.5] **PWS-163**

The SP shall define the interface requirements for the exchange of service order information in the event that the I3P contractor chooses not to use our ITSM tool. The SP shall adhere to applicable NASA policies for determining the inclusion, modification, and/or deletion/deactivation of customer catalog services.

[R.2.3.3.6] **PWS-164**

The SP shall provide partitioned views into ESRS entries based on the user role and/or Center/organization as defined within the NASA identity system.

[R.2.3.4.1.1] **PWS-179**

Create partitioned views for the I3P contractors to support daily operations.

[R.2.3.4.1.2] **PWS-180**

Deliver partitioned and customizable views for both end users and support analysts for I3P Contractor.

[R.2.3.4.1.3] **PWS-181**

Provide for views that support roll up allowing information to be queried across all partitions.

[R.2.3.4.2] **PWS-182**

The SP shall be responsible for maintaining documentation and current configuration of the ITSM system.

[R.2.3.4.3] **PWS-183**

The SP shall ensure that all Federal/NASA IT security requirements are met with respect to operating the ESRS.

[R.2.3.4.4] **PWS-184**

The SP shall configure the ESRS to utilize NASA e-auth and/or IDMAX single sign-on capability.

[R.2.3.4.5] **PWS-185**

The SP shall update the CMDB as needed for services ordered.

[R.2.3.4.6] **PWS-186**

The SP shall monitor system performance to ensure that capacity management and performance metrics are optimized.

[R.2.3.5.2] **PWS-188**

The SP shall adhere to ad hoc reporting requirements (estimated at one per quarter) from the NSSC on the performance of ESD/ESRS, e.g. performance analysis, SLI compliance, and OMB requirements on the performance of ESD/ESRS.

[R.2.3.6.1] **PWS-165**

Catalog Management and Service Ordering Support (WBS 3.8.4) The NASA Shared Services Center (NSSC) Service Provide (SP) Information Technology (IT) Team will develop a solution to alleviate the reliance on the NASA Enterprise Architecture Repository (NEAR) Interface for I3P Service offerings. The SP will use the initial service information provided by the Service Exec/Designee to engage the I3P Contractor for complete service details needed to publish a service in the ESRS. The SP will also implement a mechanism for the Service Integration Management (SIM) to provide the workflow associated with each service and bundle services across and within I3P contracts. The workload data has been modified to 100 original services and 100 service modifications per year; however, this has increased the complexity of each service resulting in an increase of labor hours per service. Once the I3P services are established in ESRS the SP will provide a file of service data back to the NEAR on a monthly basis as a part of the production release schedule.

[R.2.3.6.1.1] **PWS-166**

NASA Account Management System (NAMS): In order to facilitate the workflow necessary to publish a service in the ESRS, the SP will develop a NASA Account Management System (NAMS) approval workflow that will allow Service Exec/Designees, I3P Contractors, and the SIM to apply for the appropriate roles needed to add, delete, modify, and assign an approval workflow in the ESRS via the TIER 0 website. The roles will also allow visibility of order status on the TIER 0 website. An email will be sent to users in a given role when a task is pending action.

[R.2.3.6.1.2] **PWS-167**

Service Exec/Designee Interface. The SP will develop a user interface that will allow the Service Exec/Designee to enter initial service details for approved service offerings into a web accessible form that will trigger an ESRS Service Request called "Publish a Service in ESRS" that will accommodate adding a new service or modifying/deleting an existing service.

[R.2.3.6.1.3] **PWS-168**

I3P Interface. Using an expanded version of the web accessible form, the I3P Contractor will be presented the initial service data provided by the Service Exec/Designee and will be asked to provide complete details for each service offering requested by the Service Office.

[R.2.3.6.1.4] **PWS-169**

SIM Interface. Once the I3P Contractor has completed the web form with all necessary service related details, the SP will provide a user interface to the SIM (the audience will depend on the NAMS roles described earlier) to approve the service attributes and apply the appropriate approval workflow for each service. Five approval workflow options have been approved for use:

a. Managerial only

b. Managerial and IT

c. Managerial and Resource

d. Managerial, IT and Resource

e. No approvals required (basic entitlement for all users accessing the ESRS – SIM and Tier 2 are responsible for controls).

In the event that the service data is incomplete or incorrect, the SIM will reject the service and the system will notify the appropriate Service Exec/Designee and I3P Contractor that the SIM has rejected the request to "Publish a Service in ESRS".

[R.2.3.6.1.5] **PWS-170**

Publish a Service in ESRS. Upon approval of the service by the SIM, a work order will be created to develop the approved I3P service, and in parallel a work order will be created for the I3P Contractor to begin development of Test Cases/Scripts for the service in progress. Once development is complete, a workflow will facilitate approval to test the service and provide a mechanism to capture test acceptance approval from the Service Exec/Designee, the I3P Contractor and the SIM. Testing for all services will include:

a. Internal NSSC testing

b. SIM testing

c. I3P testing

d. Service Exec/Designee testing All phases of testing will utilize the test cases/scripts provided by the I3P Contractor and the NSSC will participate in testing all new or modified services. When the service is fully tested and ready for production the work order will be completed and an IT Change Request will be created to promote the service to production. Once the request reaches that point it will follow the normal NSSC IT process for Production implementations.

[R.2.3.6.1.6] **PWS-171**

Bundles. In accordance with the original ESD proposal, the SIM will designate bundled services across the I3P's. Additionally, this proposal provides for the SIM to designate bundles within the I3P contracts. In an effort to streamline the process, the SP will leverage the SIM's current NAMS role/interface above and add the capability to bundle services (SIM approved bundles) across and within the I3P's using an additional web accessible form. Since this proposal also allows for bundles _within_ an I3P contract, the bundles will increase from 50 to 100. In the event that a service within a bundle is modified or deleted, the SP will provide a mechanism to notify the SIM of this change to allow the bundle to be adjusted accordingly.

[R.2.3.6.1.7] **PWS-172**

Quick Reference Guides/User Support. The SP will provide information to the NSSC Customer Satisfaction and Communication team to develop user guides that will assist the Service Exec/Designees, the I3P Contractor, and the SIM with use of the web forms. The SP will also provide TIER 1 and TIER 2 user support for issues associated with publishing a service. A coordinated effort between the NSSC and BMC will provide TIER 3 support for the ESRS.

[R.2.3.6.1.8] **PWS-173**

Records Management. In CO #28 the NEAR was slated as the "system of record" for all information related to services offered by the I3P contracts. Since the NEAR is no longer the repository for service related data, the NSSC will now hold and manage the "system of record" for all ESRS service request. Additionally CO #28 did not contain any records management efforts for other areas within ESD that may contain "official records". Due to the recent records management project initiative, the discovery and ongoing maintenance for all ESD related systems/solutions is necessary to ensure compliance with current NSSC Records Management Plans and all applicable NARA regulations and NASA Records Management procedural requirements.

[R.2.3.6.1.9] **PWS-174**

Quality Review. The SP will develop a Quality Review tab in Remedy for work orders to capture quality errors and create a process for identifying and reviewing quality errors for the NSSC, Service Exec/Designee, I3P Contractor and the SIM.

[R.2.3.6.1.10] **PWS-175**

Delta Critical Design Review (CDR). In support of NASA Procedural Requirement (NPR) 7120.7, the SP will provide information to support a Delta CDR for the following ESD contract modifications currently in progress.

a. Checkbook/SAP Interface

b. Approver's Database

c. Notifications Tool

d. The NEAR Interface Workaround (including support for TRR and ORR)

e. The Review Item Discrepancies (RIDS) from the original CDR will also be addressed

[R.2.3.6.1.11] **PWS-176**

Queries. The SP will provide the following queries to aid in managing the development of services:

a. Services/Bundles in Development,

b. Services/Bundles Deployed by date range,

c. Services/Bundles Modified by date range,

d. Services/Bundles Deleted by date range and

e. Services requiring Re-Work by date range

These queries will be developed and delivered using Remedy Dashboards & Analytics. As specified in sections 1.2, 1.3 and 1.4, NAMS roles will define access to the queries and the data partitions.

[R.2.3.6.1.12] **PWS-177**

NASA Enterprise Repository (NEAR) Interface. As defined in the NEAR IDS as of 9/30/2010, the SP will provide a web services interface to provide initial service information for services currently published in ESRS to the NEAR. There will be no information provided on bundled services. This data will be provided monthly based on the production release schedule.

[R.2.3.9.1] **CO28Revs-001**

While it is acknowledged that the final set of catalog services and service bundles across the I3P contracts has not been fully specified or defined, the SP will put forth its best efforts to have the services available at the various I3P "Go-live" dates. These catalog services will be categorized as Priority 1 (required for go-live) or Priority 2 (desired for go-live), and the Government and the SP will jointly develop a detailed ESRS implementation schedule specifying the target operational dates for each I3P services and service bundles." A generic service will be implemented at go-live for each I3P contract to accommodate any Priority 2 services that are not yet available in the ESRS. The generic service will follow the standard ESRS flow.

[R.2.3.10.2] **TE1-002**

ESD TIER 1 Service Desk [see figures]

| **ODIN Help Desk Calls for FY08 by Center** | |
|---|---|
| **Center** | **Count** |
| ARC Count | 13660 |
| DFRC Count | 10128 |
| GRC Count | 37669 |
| GFSC Count | 30825 |
| JSC Count | 61181 |
| KSC Count | 36042 |
| LaRC Count | 19938 |
| MSFC Count | 40440 |
| HQ Count | 37880 |
| NSSC Count | 2574 |
| SSC Count | 6245 |
| **Total** | **296582** |

**Figure 2**

| ODIN Help Desk Calls for FY08 by Month | |
|---|---|
| **Month** | **Count** |
| October 2007 | 25033 |
| November 2007 | 20977 |
| December 2007 | 18239 |
| January 2008 | 25040 |
| February 2008 | 22761 |
| March 2008 | 26622 |
| April 2008 | 26490 |
| May 2008 | 25648 |
| June 2008 | 25801 |
| July 2008 | 26857 |
| August 2008 | 25768 |
| September 2008 | 27346 |
| **Total** | **296582** |

**Figure 3**

| Call Totals for NISC Help Desk by Month | |
|---|---|
| **Month** | **Calls by Month** |
| October, 2007 | 3111 |
| November, 2007 | 3012 |
| December, 2007 | 5708 |
| January, 2008 | 3738 |
| February, 2008 | 3399 |
| March, 2008 | 5061 |
| April, 2008 | 4614 |
| May, 2008 | 5087 |
| June, 2008 | 3825 |
| July, 2008 | 4463 |
| August, 2008 | 4166 |
| September, 2008 | 5420 |
| **Total** | **51,604** |

| Source of Calls Statistics for NISC Help Desk | | |
|---|---|---|
| **Source of Calls** | **Count** | **Avg Duration** |
| Alarm Count | 8964 | 22:20:26 |
| Call Count | 32165 | 8:57:46 |
| DSO Count | 5800 | 8:28:45 |
| E-mail Count | 2015 | 20:15:26 |
| External System Count | 16 | 21:04:22 |
| Import Count | 1 | 14:56:00 |
| Log Count | 10 | 3:30:14 |
| Web Count | 2633 | 4:25:20 |
| **Total** | **51,604** | |

**Figure 4**

| Time of Day | Day 1 # of Calls | Day 2 # of Calls | Day 3 # of Calls | Day 4 # of Calls | Day 5 # of Calls | Day 6 # of Calls | Day 7 # of Calls |
|---|---|---|---|---|---|---|---|
| 0:00 | 3 | 3 | 5 | 5 | 5 | 5 | 6 |
| 0:30 | 2 | 2 | 4 | 4 | 5 | 4 | 6 |
| 1:00 | 2 | 2 | 3 | 4 | 5 | 4 | 5 |
| 1:30 | 2 | 3 | 3 | 3 | 3 | 3 | 4 |
| 2:00 | 2 | 3 | 4 | 4 | 9 | 4 | 4 |
| 2:30 | 3 | 3 | 3 | 3 | 4 | 4 | 3 |
| 3:00 | 2 | 3 | 4 | 4 | 4 | 5 | 6 |
| 3:30 | 2 | 2 | 3 | 2 | 3 | 4 | 4 |
| 4:00 | 2 | 2 | 3 | 3 | 3 | 3 | 4 |
| 4:30 | 2 | 2 | 3 | 3 | 4 | 2 | 4 |
| 5:00 | 2 | 4 | 3 | 2 | 3 | 3 | 5 |
| 5:30 | 3 | 2 | 6 | 3 | 2 | 3 | 5 |
| 6:00 | 3 | 3 | 3 | 3 | 3 | 3 | 8 |
| 6:30 | 2 | 7 | 4 | 4 | 4 | 4 | 8 |
| 7:00 | 2 | 6 | 5 | 5 | 5 | 5 | 3 |
| 7:30 | 2 | 7 | 7 | 6 | 8 | 6 | 3 |
| 8:00 | 2 | 8 | 7 | 7 | 9 | 6 | 8 |
| 8:30 | 2 | 9 | 12 | 9 | 10 | 8 | 5 |
| 9:00 | 2 | 11 | 12 | 12 | 10 | 8 | 3 |
| 9:30 | 3 | 15 | 13 | 13 | 14 | 10 | 4 |
| 10:00 | 2 | 13 | 18 | 11 | 11 | 9 | 5 |
| 10:30 | 3 | 18 | 19 | 13 | 14 | 11 | 5 |
| 11:00 | 2 | 19 | 23 | 18 | 17 | 17 | 2 |
| 11:30 | 2 | 31 | 30 | 31 | 26 | 23 | 3 |
| 12:00 | 2 | 45 | 45 | 39 | 35 | 33 | 2 |
| 12:30 | 2 | 63 | 60 | 53 | 50 | 46 | 3 |
| 13:00 | 2 | 73 | 70 | 63 | 62 | 56 | 3 |
| 13:30 | 2 | 90 | 85 | 81 | 74 | 68 | 3 |
| 14:00 | 3 | 83 | 84 | 75 | 69 | 63 | 3 |
| 14:30 | 3 | 85 | 88 | 83 | 79 | 71 | 3 |
| 15:00 | 3 | 79 | 79 | 75 | 70 | 63 | 3 |
| 15:30 | 3 | 76 | 78 | 75 | 70 | 62 | 3 |
| 16:00 | 3 | 63 | 64 | 60 | 57 | 51 | 3 |
| 16:30 | 3 | 59 | 60 | 57 | 54 | 50 | 3 |
| 17:00 | 3 | 51 | 54 | 53 | 49 | 43 | 3 |
| 17:30 | 3 | 57 | 59 | 61 | 50 | 48 | 3 |
| 18:00 | 3 | 53 | 59 | 57 | 51 | 50 | 3 |
| 18:30 | 3 | 61 | 68 | 58 | 54 | 53 | 3 |
| 19:00 | 3 | 53 | 52 | 52 | 52 | 54 | 4 |
| 19:30 | 3 | 53 | 56 | 53 | 53 | 58 | 3 |
| 20:00 | 2 | 45 | 52 | 47 | 47 | 44 | 3 |
| 20:30 | 4 | 46 | 46 | 45 | 44 | 40 | 4 |
| 21:00 | 3 | 33 | 35 | 33 | 33 | 28 | 3 |
| 21:30 | 2 | 26 | 27 | 27 | 26 | 24 | 2 |
| 22:00 | 3 | 16 | 16 | 15 | 15 | 15 | 3 |
| 22:30 | 3 | 13 | 12 | 14 | 11 | 13 | 2 |

**Figure 5**

### [R.2.3.11.1] **TE2-001**

Average Speed to Answer = 80% [within 60 seconds]

| | Description | Measurement Window | Year 2 and Beyond Service Level | Year 1 Service Level |
|---|---|---|---|---|
| 1.1. ESD - I3P TIER 1 Service | | | | |
| 1.1.1 | Average Speed to Answer (ASA) | Monthly | 80.00% | 80.00% |
| 1.1.2 | Customer Satisfaction | Monthly | 90.00% | 85.00% |
| 1.1.3 | Call Abandon Rate | Monthly | 7.00% | 7.00% |
| 1.1.4 | First Call Resolution | Monthly | 95.00% | 90.00% |
| 1.1.5 | Availability of ESD Applications and Systems (Critical and Non-Critical) | Monthly | 99.95% | 97.00% |
| 1.2. ESD - I3P TIER 0 Service | | | | |
| 1.2.1 | Customer Satisfaction | Monthly | 85.00% | 75.00% |
| 1.2.2 | Distribution Lists | Monthly | 99.00% | 97.00% |
| 1.2.3 | Availability of ESRS Applications and Systems (Critical and Non-Critical) | Monthly | 99.95% | 97.00% |

**Figure 9**

| Critical Service Level | |
|---|---|
| 1.1.1 Average Speed to Answer (ASA) | |
| Service Level Description | The SP will design and provide an ESD TIER 1 service sufficient to sustain the NSSC's targeted Average Speed to Answer (ASA) response times. |
| Definitions | See Calculation |
| Hours of Operation | 7 x 24 |
| Service Level Target | Refer to the Critical Service Level Matrix, Section 1.1.1. |
| Calculation | Average Speed to Answer (ASA) shall be calculated as the number of telephone calls answered within sixty (60) seconds from the time a User places a telephone Call into the Service Desk Automated Call Distributor (ACD) and makes a selection to speak to a Service Desk representative until the time the telephone Call is answered by a Service Desk representative, in each calendar month, divided by the total number of telephone Calls answered in the same calendar month, multiplied by 100 with the result expressed as a percentage to two (2) decimal places. |
| Measurement | SP will utilize NASA's Remedy system and Centergy / Cisco IPCC tools to measure and report actual Average Speed to Answer. |
| Requirements and Dependencies | None. |
| Exceptions and Exclusions | Call Volume exceeding 110% of projected workload |

**Figure 10**

**[R.2.3.11.2] TE2-002**

Tier 1 Customer Satisfaction = 90% (85% Year 1)

| **Critical Service Level** | |
|---|---|
| 1.1.2 Customer Satisfaction with TIER 1 Service | |
| | |
| Service Level Description | The SP will design, and provide an ESD TIER 1 service sufficient to sustain the NSSC's targeted Customer Satisfaction performance levels. |
| Definitions | Customer Satisfaction shall be based upon a statistical sample of the customers. The sample size will be based on a 90% confidence interval and a 5% margin of error. The customer satisfaction will be measured upon closure of an Incident/Problem. Survey responses will be on a five (5) point scale:<br>• 1 - very dissatisfied<br>• 2 - dissatisfied<br>• 3 - neither satisfied nor dissatisfied<br>• 4 - satisfied<br>• 5 - very satisfied.<br>Customer Satisfaction Surveys will be electronically distributed to the originator of the Incident during the Incident closure step, and shall include a means to distinguish ESD calls from ESRS calls. |
| Hours of Operation | 7 x 24 |
| Service Level Target | Refer to the Critical Service Level Matrix, Section 1.1.1. |
| Calculation | Customer Satisfaction performance shall be calculated by summing the survey ratings for each category and dividing the sum by the total number of responses received in the month, with the result expressed as a percentage to two (2) decimal places. |
| Measurement | The SP will use NASA's Inquisite tool to measure and report actual Customer Satisfaction for the services applicable to a lean TIER 1 Service desk. |
| Requirements and Dependencies | None |
| Exceptions and Exclusions | None |
| | |

**Figure 11**

**[R.2.3.11.3] TE2-003**

Call Abandon Rate = 7%

| **Critical Service Level** | |
|---|---|
| 1.1.3 Call Abandon Rate | |
| | |
| Service Level Description | The SP will design and provide an ESD TIER 1 service sufficient to sustain the NSSC's targeted Call Abandon Rate performance levels. |
| Definitions | See Calculation, and Exceptions and Exclusions |
| Hours of Operation | 7 x 24 |
| Service Level Target | Refer to the Critical Service Level Matrix, Section 1.1.1. |
| Calculation | Call Abandon Rate shall be calculated by dividing the number of calls that are terminated prior to answer by a Service Desk representative or Automatic Call Distributor (ACD) unit by the total number of calls placed to the Service Desk within a month, with the result expressed as a percentage to two (2) decimal places.<br>Calls in which the User elects to leave a voice mail message initially instead of waiting for a Service Desk representative shall be excluded from the measurement. Also, calls that are routed to automated messages will be excluded from the measurement. |
| Measurement | The SP will utilize NASA's Remedy and Centergy / Cisco IPCC tools to measure and report actual Call Abandon Rates. |
| Requirements and Dependencies | None |
| Exceptions and Exclusions | Calls terminated prior to the caller making a selection from the automated menu will be excluded from the calculation. Call Volume exceeding 110% of projected workload |
| | |

**Figure 12**

**[R.2.3.11.4] TE2-004**

Availability of ESD Applications and Systems (Critical and Non-Critical) = 99.95% (97% Year 1)

| Critical Service Level | |
|---|---|
| 1.2.3 Availability of ESD/ESRS Applications | |
| Service Level Description | The SP will design and provide an ESD Application Support service for Critical ESD Applications sufficient to sustain the NSSC's targeted availability performance levels. |
| Definitions | "Availability" occurs when applications are ready for customer use and are accessible by all customers |
| Hours of Operation | 7 x 24 |
| Service Level Target | Refer to the Critical Service Level Matrix, Section 1.1.1. |
| Calculation | Availability of monitored Critical ESD Applications in each calendar month. This calculation will commence upon completion and review of availability-monitoring modifications to monitoring tool. |
| Measurement | Availability for all monitored Critical ESD Applications in each calendar month. This calculation will commence upon completion and review of availability-monitoring modifications to monitoring tool. |
| Requirements and Dependencies | None |
| Exceptions and Exclusions | Planned outages and outages due to factors beyond the SP control, i.e., power, network |

**[R.2.3.11.5] TE2-005**

Tier 0 Customer Satisfaction = 85% (75% Year 1)

| Critical Service Level | |
|---|---|
| 1.2.1 Customer Satisfaction with TIER 0 Service | |
| Service Level Description | The SP will design and maintain an ESD TIER 0 service sufficient to sustain the NSSC's targeted Customer Satisfaction performance levels. |
| Definitions | Customer Satisfaction shall be measured at each instance of a web page viewing at the TIER 0 web service (FAQ, knowledge base, etc). Satisfaction shall be measured based on customer response to the question, "Was this information helpful?", with the possible responses being Yes / No / I Don't Know. |
| Hours of Operation | 7 x 24 |
| Service Level Target | Refer to the Critical Service Level Matrix, Section 1.1.1. |
| Calculation | Customer Satisfaction performance shall be calculated by summing the survey ratings and dividing the sum by the total number of responses received in the month, with the result expressed as a percentage to two (2) decimal places. |
| Measurement | Calculate Customer Satisfaction measurements as calculated above, and shall include a means to distinguish the ESD from the ESRS |

**Figure 13**

**[R.2.3.11.6] TE2-006**

Distribution Lists = 99% (97% Year 1)

| Critical Service Level | |
|---|---|
| 1.2.2 Distribution Lists | |
| Service Level Description | The SP will design and maintain an ESD TIER 0 service sufficient to sustain the Authorized User distribution lists for use when distributing notifications and communications of outages, service interruptions, etc. |
| Definitions | The SP shall maintain appropriate distribution lists for the various I3P communities of Authorized Users. |
| Hours of Operation | 7 x 24 |
| Service Level Target | Refer to the Critical Service Level Matrix, Section 1.1.1. |
| Calculation | Number of changes made to the distribution lists divided by number of updates received within 30 days from the I3P Contractors, with the result expressed as a percentage to two (2) decimal places. |
| Measurement | Number of changes counted by the appropriate system(s) |
| Requirements and Dependencies | None |
| Exceptions and Exclusions | Updates not received from the NSSC or I3P Contractors will not be counted in the calculation. Updates exceeding 110% of workload. |

**Figure 14**

**[R.2.3.11.7] TE2-007**

Availability of ESRS Applications and Systems (Critical and Non-Critical) = 99.95% (97% Year 1)

| Critical Service Level | |
|---|---|
| 1.2.3 Availability of ESD/ESRS Applications | |
| Service Level Description | The SP will design and provide an ESD Application Support service for Critical ESD Applications sufficient to sustain the NSSC's targeted availability performance levels. |
| Definitions | "Availability" occurs when applications are ready for customer use and are accessible by all customers |
| Hours of Operation | 7 x 24 |
| Service Level Target | Refer to the Critical Service Level Matrix, Section 1.1.1. |
| Calculation | Availability of monitored Critical ESD Applications in each calendar month. This calculation will commence upon completion and review of availability-monitoring modifications to monitoring tool. |
| Measurement | Availability for all monitored Critical ESD Applications in each calendar month. This calculation will commence upon completion and review of availability-monitoring modifications to monitoring tool. |
| Requirements and Dependencies | None |
| Exceptions and Exclusions | Planned outages and outages due to factors beyond the SP control, i.e., power, network |

**Figure 15**

**[R.2.3.11.8] TE2-008**

Time to Escalate / Close- Severity 1 Incidents / Problems = 98% (96% Year 1)

| | Description | Measurement Window | Year 2 and Beyond Service Level | Year 1 Service Level |
|---|---|---|---|---|
| 2.1 ESD TIER 1 Help Desk Service | | | | |
| 2.1.1 | Time to Escalate / Close - Severity 1 Incidents / Problems | Monthly | 98.00% | 96.00% |
| 2.1.2 | Time to Escalate / Close - Severity 2 Incidents / Problems | Monthly | 89.00% | 85.00% |
| 2.1.3 | Time to Escalate / Close - Severity 3 Incidents / Problems | Monthly | 89.00% | 85.00% |
| 2.1.5 | Right First-Time Allocation of Incidents to Level 2 | Monthly | 90.00% | 85.00% |
| 2.2 ESD TIER 0 Self Service Web Services | | | | |
| 2.2.1 | Web Service Kept Current | Monthly | 98.00% | 95.00% |
| 2.2.2 | Communications to Authorized Users Delivered Promptly | Monthly | 99.00% | 98.00% |
| 2.2.3 | No PII Incidents | Monthly | 100% | 100.00% |

**Figure 16**

| **Key Performance Indicator (KPI)** | |
|---|---|
| 2.1.1 Time to Escalate / Close Severity 1 Incidents / Problems | |
| Service Level Description | The SP will design and provide an ESD TIER 1 service sufficient to sustain the NSSC's targeted Time to Escalate / Close Severity 1 Incidents / Problems. |
| Definitions | Refer to Calculation |
| Hours of Operation | 7 x 24 |
| Service Level Target | Refer to the KPI Service Level Matrix, Section 1.2.1. |
| Calculation | Time to Escalate/Close shall be calculated as the number of Severity Level 1 Incidents/Problems escalated/closed within ten (10) minutes, divided by the total number of Severity Level 1 problems reported and/or assigned to the Service Desk during the month, with the result expressed as a percentage to two (2) decimal places. The proper escalation will be dependent on the information provided by the customer. |
| Measurement | Time to Escalate Severity 1 Incidents / Problems shall be measured in minutes as the elapsed time from when the End User notifies the Service Desk of the Severity 1 Problem to the time the Service Desk electronically notifies the TIER 2 contractor of the problem or notifies the End User that the problem has been resolved.. |
| Requirements and Dependencies | ESD Performance requirements are as follows:<br>• 10 minute maximum dispatch to contractor<br>• 10 minute maximum call & wrap (after contractor has completed call – includes automated closure notice to end user)<br>• Status check at 75th percentile (for Severity 1, calculated as (0.75*2.0 hours = 1.5 hours)<br>• Status check at 95th percentile (for Severity 1, calculated as (0.95*2.0 hours or 1.9 hours)<br>Incident closure may require the end user(s) to be available at the time of incident completion. In the event that user contact is required to complete incident closure and the user is unavailable, ESD will follow the Notification Process in accordance with the Incident Management and Problem Management Process and Policy.<br>All Severity Level 1 problems are to be tracked. |
| Exceptions and Exclusions | None |

**Figure 17**

**[R.2.3.11.9] TE2-009**

Time to Escalate / Close- Severity 2 Incidents / Problems = 89% (85% Year 1)

| **Key Performance Indicator (KPI)** | |
|---|---|
| 2.1.2 Time to Escalate / Close Severity 2 Incidents / Problems | |
| | |
| Service Level Description | The SP will design and provide an ESD TIER 1 service sufficient to sustain the NSSC's targeted Time to Escalate / Close Severity 2 Incidents / Problems. |
| Definitions | Refer to Calculation |
| Hours of Operation | 7 x 24 |
| Service Level Target | Refer to the KPI Service Level Matrix, Section 1.2.1. |
| Calculation | Time to Escalate / Close shall be calculated as the number of Severity Level 2 Incidents/Problems escalated / closed within an average of fifteen (15) minutes, divided by the total number of Severity Level 2 problems reported and / or assigned to the Service Desk during the month, with the result expressed as a percentage to two (2) decimal places. The proper escalation will be dependent on the information provided by the customer. |
| Measurement | Time to Escalate Severity 2 Incidents / Problems shall be measured in minutes as the elapsed time from when the End User notifies the Service Desk of the Severity 2 Problem to the time the Service Desk electronically notifies the TIER 2 contractor of the problem or notifies the End User that the problem has been resolved. |
| Requirements and Dependencies | ESD Performance requirements are as follows:<br>• 15 minute average dispatch to contractor<br>• 15 minute average call & wrap (after contractor has completed call – includes automated closure notice to end user)<br>• Status check at 75th percentile (for Severity 2, calculated as (0.75*6.0 hours = 4.50 hours)<br>• Status check at 95th percentile (for Severity 2, calculated as (0.95*6.0 hours = 5.70 hours)<br>All Severity Level 2 problems are to be tracked. |
| Exceptions and Exclusions | None |
| | |

**Figure 18**

**[R.2.3.11.10] TE2-010**

Time to Escalate / Close- Severity 3 Incidents / Problems = 89% (85% Year 1)

| **Key Performance Indicator (KPI)** | |
|---|---|
| **2.1.3 Time to Escalate / Close Severity 3 Incidents / Problems** | |
| Service Level Description | The SP will design and provide an ESD TIER 1 service sufficient to sustain the NSSC's targeted Time to Escalate / Close Severity 3 Incidents / Problems. |
| Definitions | Refer to Calculation |
| Hours of Operation | 7 x 24 |
| Service Level Target | Refer to the KPI Service Level Matrix, Section 1.2.1. |
| Calculation | Time to Escalate / Close shall be calculated as the number of Severity Level 3 Incidents / Problems escalated / closed within fifteen (15) minutes, divided by the total number of Severity Level 3 problems reported and / or assigned to the Service Desk during the month, with the result expressed as a percentage to two (2) decimal places The proper escalation will be dependent on the information provided by the customer. |
| Measurement | Provider Time to Escalate / Close Severity 3 Incidents / Problems shall be measured in minutes as the elapsed time from when the End User notifies the Service Desk of the Severity 3 problem to the time the Service Desk electronically notifies the TIER 2 contract of the problem or notifies the End User that the problem has been resolved. |
| Requirements and Dependencies | ESD Performance requirements are as follows:<br>• 15 minute average dispatch to contractor<br>• 15 minute average call & wrap (after contractor has completed call – includes automated closure notice to end user)<br>• Status check at 75th percentile (for Severity 3, calculated as (0.75*3 days = 2.25 days)<br>• Status check at 95th percentile (for Severity 3, calculated as (0.95*3 days = 2.85 days)<br>All Severity Level 3 problems are to be tracked. |
| Exceptions and Exclusions | None |

**Figure 29**

**[R.2.3.11.11] TE2-011**

Right First-Time Allocation of Incidents to Level 2 = 90% (85% year 1)

| **Key Performance Indicator (KPI)** | |
|---|---|
| 2.1.5 Right First-Time Allocation of Incidents to Level 2 | |
| Service Level Description | The SP will design and provide an ESD TIER 1 service sufficient to sustain the established targets forRight First-Time Allocation of Incidents to Level 2. |
| Definitions | **"Successful Allocation"** shall mean the initial escalation by the Service Desk to Level 2 Contractor is the same Level 2 Contractor that closes the Incident or performs work necessary to resolve the problem, including coordination with other I3P contractors and TIER 3<br>**"Failed Allocation"** shall mean the Incident was incorrectly escalated by the Service Desk. resulting in a different Level 2 Contractor working the Incident than the initial Level 2 Contractor to which the Incident was originally allocated by the Service Desk. A "Failed Allocation" shall include the escalation of an Incident to the I3P when the root cause is known.<br>The proper escalation will be dependent on the information provided by the customer. |
| Hours of Operation | 7 x 24 |
| Service Level Target | Refer to the KPI Service Level Matrix, Section 1.2.1. |
| Calculation | **Right First Time Allocation of Incidents to Level 2** performance shall be calculated as the total number of "Successful Allocations", divided by the sum of (i) the total number of "Successful Allocations" and (ii) the total number of "Failed Allocations" in a month, with the results expressed as a percentage to two (2) decimal places.<br>For the avoidance of doubt, only Incidents closed in a given month will be included in the performance calculation, even if the Incident was escalated during the prior month. The Incident does not need to be escalated and closed in the same month in order to be included in the performance calculation. |
| Measurement | The targeted percentage of Incidents allocated to Level 2 shall be successfully allocated the first time as calculated above. |
| Requirements and Dependencies | None |
| Exceptions and Exclusions | Exclusions: |

**Figure 20**

**[R.2.3.11.12] TE2-012**

Web Service Kept Current = 98% (95% Year 1)

| **Key Performance Indicator (KPI)** | |
|---|---|
| 2.2.1 Web Service Kept Current | |
| | |
| Service Level Description | The SP will design and provide an ESD TIER 0 service sufficient to sustain the established targets for keeping the web service current. |
| Definitions | The SP shall provide Authorized User self-help, including the posting of I3P Known Error information and "how to" information relating to supported services via the TIER 0 web service.<br><br>The SP shall disseminate information about the I3P service environment including posting schedules of changes to the I3P services, new I3P services, I3P service training materials, I3P Authorized User guides, answers to frequently asked questions (FAQs) as provided by the I3P contractors and the SIM.<br><br>The SP shall update the web service and associated knowledge bases with information derived from Incident and Problem Management activities relevant to customer feedback and trend analysis, and with information provided by TIER 2 contractors. |
| Hours of Operation | 7 x 24 |
| Service Level Target | Refer to the KPI Service Level Matrix, Section 1.2.1. |
| Calculation | For I3P contract updates, the calculation is number of updates posted to the TIER 0 web service divided by the number of updates received from the I3P Contractors in 30 days.<br><br>For Incident and Problem Management activities, the calculation is number of updates posted to the TIER 0 web service divided by the number of Incident and Problem Management activities in 30 days, with the result expressed as a percentage to two (2) decimal places. |
| Measurement | Refer to the KPI Service Level Matrix, Section 1.2.1. |
| Requirements and Dependencies | None |
| Exceptions and Exclusions | Workload volume exceeding 110% of estimate |
| | |

**Figure 21**

[R.2.3.11.13] **TE2-013**

Communications to Authorized Users Delivered Promptly = 99% (98% Year 1)

| **Key Performance Indicator (KPI)** | |
|---|---|
| 2.2.2 Communications to Authorized Users Delivered Promptly | |
| | |
| Service Level Description | The SP will design and provide an ESD service sufficient to sustain the established targets for delivering communications regarding outages, service disruptions, etc. to Authorized Users promptly. |
| Definitions | The SP shall broadcast known I3P service disruption information. The SP shall provide an electronic communication to Authorized Users to be delivered to Authorized Users three times before a scheduled event occurs. The timing of the communications may vary, but unless otherwise specified, will occur as defined in Section 3.2.4.1. |
| Hours of Operation | 7 x 24 |
| Service Level Target | Refer to the KPI Service Level Matrix, Section 1.2.1. |
| Calculation | 1. Total number of communications delivered to Authorized Users divided by the sum of the number of communications generated by the SP, received from I3P Contractors and the NSSC. 2. Total number of communications delivered on time divided by total number of communications delivered, with the result expressed as a percentage to two (2) decimal places. |
| Measurement | Refer to the KPI Service Level Matrix, Section 1.2.1. |
| Requirements and Dependencies | Proper categorization of notification by I3P contractor. |
| Exceptions and Exclusions | Communications not received from the I3P Contractors in a timely manner will not be counted. Workload volume exceeding 110% of estimate. |
| | |

**Figure 22**

**|R.2.3.11.14| TE2-014**

No PII Incidents = 100%

| **Key Performance Indicator (KPI)** | |
|---|---|
| 2.2.3 No PII Incidents | |
| | |
| Service Level Description | The SP will design and provide an ESD service sufficient to sustain the established targets for ensuring no Personally Identifiable Information (PII) is released. |
| Definitions | The SP shall adhere to all NASA standards regarding IT security and protection of personnel privacy information. |
| Hours of Operation | 7 x 24 |
| Service Level Target | Refer to the KPI Service Level Matrix, Section 1.2.1. |
| Calculation | Number of incidents where PII was posted, released, distributed or compromised by the SP, its subcontractors, or staff, with the result expressed as a percentage to two (2) decimal places. |
| Measurement | Refer to the KPI Service Level Matrix, Section 1.2.1. |
| Requirements and Dependencies | None |
| Exceptions and Exclusions | PII information posted by individuals outside the SP's control. |
| | |

**Figure 23**

**[R.2.3.11.15] TE2-015**

First-Call Resolution = 95% (90% year 1)

| Critical Service Level | |
|---|---|
| 1.1.4 First Call Resolution | |
| | |
| Service Level Description | The SP will design and provide an ESD TIER 1 service sufficient to sustain the NSSC's targeted First Call Resolution performance levels. |
| Definitions | See Calculation |
| Hours of Operation | 7 x 24 |
| Service Level Target | Refer to the Cntical Service Level Matnx, Section 1.1.1. |
| Calculation | Percentage of incoming calls resolved without the use of a callback, or without having the caller call back the helpdesk to finish resolving the case. FCR as it pertains to the Tier 1 Help Desk of the ESD is the Tier 1 calls resolved without the use of a callback, or without having the caller call back the helpdesk to finish resolving the case divided by the total number of Tier 1 calls received. "Tier 1 calls received" for the purpose of computing FCR are calls that were or should have been resolved at Tier 1. This definition applies to 1.1.4 |
| Measurement | The SP will utilize NASA's Remedy tool to measure and report actual First Call Resolution. |

**Figure 24**

**[R.2.3.12.1.1] TE3-001**

The SP shall provide and maintain a controlled-access on-line, automated management and work information system(s). This management information system shall reflect the workload expended by the SP to accomplish the requirements of the contract or letter of obligation and this PWS

**[R.2.3.12.1.2] TE3-002**

Access to this system will be defined by the COTR; however, if access requests will result in changes to the contract, the COTR will work through the CO to authorize such access. The SP shall provide authorized users* with electronic access to this system. Access includes the ability to read and download data, and construct and execute ad hoc queries and custom reports with current and historical data as captured by the ESD/ESRS. Extracted data shall be compatible with Microsoft software products. Data shall be current, accurate, and complete. The SP shall develop and maintain user guides and provide training for users on how to access on-line management information systems

**[R.2.3.12.1.3] TE3-003**

Attachment J-3 Technical Exhibit 4 contains the Performance Requirements Summary (PRS), which is a listing of minimum performance requirements that the Government intends to use to verify and evaluate SP performance. The SP shall develop, maintain, analyze, and report performance metrics for work described in this PWS, particularly, performance requirements addressed in the PRS. The SP shall report these metrics as part of management reviews. The SP shall provide objective, measurable metrics as partnered with the NSSC. The SP shall report existing or potential problem areas with recommended solutions. The SP shall prepare and submit a Performance Measurement Plan (DRD 2.5-2). The SP shall submit a semi-annual electronic Performance Metrics Report to the NSSC, in accordance with DRD 2.5-1.The SP shall prepare and submit a Performance and Utilization Report in support of Service Level Agreements (SLA) reporting requirements documented in the annually approved SLA (DRD 2.5.3).

[R.2.3.12.1.4] **TE3-004**

The SP shall prepare and deliver reports upon request from the NSSC CO or COTR. Requested reports may contain Administratively Controlled Information (ACI) as defined in NPR 1600.1 "NASA Security Program Procedural Requirements," Chapter 5, section 5.22, as amended

[R.2.3.12.2.1] **TE3-005**

General: Required data includes all Service Level Indicators (Critical Service Levels and Key Performance Indicators) including the number & percentage of SLIs met/not met and the frequency with which individual SLIs are met/not met

[R.2.3.12.2.2] **TE3-006**

TIER 1: Average Abandonment Time, , Average Call Duration, , Calls Abandoned, Calls Answered, Cases Opened / Closed at the Service Desk, Cases Transferred to Other Contractors (sortable by frequency to produce "Top 10" list), e-Ticket Volume, Problem Types (sortable by frequency to produce "Top 10" list), call volume data NOTE: After Contract Award, we will need to determine how to get the IPCC data from ODIN

[R.2.3.12.2.3] **TE3-007**

TIER 0: Mirror existing Web Trends reporting

[R.2.3.12.2.4] **TE3-008**

SIM Support: Current distribution lists, ESD/ESRS- related Configuration Item verification, customer satisfaction survey results

[R.2.3.12.2.5] **TE3-009**

ESRS: Service Request backlog, number of Service Requests Initiated, number of service requests closed, time to close, number of TIER 1 incidents/problems related to the ESRS

[R.2.3.12.3.1] **TE3-010**

To support the NSSC to prepare for and present required documentation to the OCIO required to build-out the ESD and ESRS, in accordance with NPR 7120.7

[R.2.3.12.3.2] **TE3-011**

The SP shall attend and support weekly status briefings with the NSSC, to be held locally during the transition period, for feedback and progress reporting

[R.2.3.12.3.3] **TE3-012**

The SP shall support the enhancement of the existing NSSC Business Continuity Plan to include the ESD/ESRS, with reviews, exercises, and updates as per the existing contract with the NSSC

[R.2.3.12.3.4] **TE3-013**

The SP shall develop and maintain all operations documentation as per the PWS

[R.2.3.12.3.5] **TE3-014**

The SP shall prepare, implement and maintain, for NSSC approval, a Release Management plan, in accordance with NASA's Release and Deployment Management Process. The SP's Release Management plan shall define release schedules and procedures, a Change Management approach to include a communications plan, rules of engagement for the usage of systems across the system landscapes and an NSSC-approved back-out plan

[R.2.3.13.1] **TE4-001**

As part of providing ESD and ESRS services, the systems, processes, and staffing plan must be established. Therefore, SP support is required in two areas – build-out and transition, and steady-state operations. The build-out and transition is a defined project with a specific start and end date. The SP shall provide project management and system development support during this phase as per the Data Requirement Descriptions (DRD's). The project shall follow the NPR 7120.7 Project Management requirements. A high-level project plan has been developed by the NSSC to establish key milestones and decision points, and is provided as an attachment. The SP's ESD/ESRS Project Plan shall serve as a management tool for the NSSC and the SP, and shall act as a guiding document throughout the life cycle of the implementation. The ESD/ESRS project plan objectives shall include:

[R.2.3.13.1.1] **TE4-002**

Seamless transfer of service from the current contractors to the SP

[R.2.3.13.1.2] **TE4-003**

Establishment of the management processes and relationship structure to ensure the quality of the service provided meets the desired Service Levels

[R.2.3.13.1.3] **TE4-004**

Minimization of disruptions to NASA end users during implementation activities

[R.2.3.13.2.1] **TE4-005**

(DRD) The SP shall adhere to and develop the detailed tasks within the high-level ESD/ESRS project plan, which identifies the major tasks and milestones needed to establish ESD/ESRS capabilities and sustaining operations

[R.2.3.13.2.2] **TE4-006**

(DRD) The SP's ESD/ESRS Project Plan shall adhere to NPR 7120.7 Program and Project requirements. Note that NPR 7120.7 allows for iterative methods of build-out, with frequent feedback from the NSSC to the SP during the process. Regular meetings between the NSSC and the SP will be held during the transition phase in accordance with the DRD's, and as needed thereafter

[R.2.3.13.2.3] **TE4-007**

The SP shall establish an ESD and ESRS at the NSSC to support NASA's I3P services with an operational "go-live" date as established in the ESD/ESRS high-level project plan. Two operational dates are defined – I3P Contract Transition readiness and Customer Support Services. The ESD/ESRS must be ready to support the transition of I3P contracts awarded. The ESD/ESRS infrastructure and processes must be tested, implemented, and accepted by the operational "go-live" date for I3P Contract Transition shown on the High-Level Project Plan. The Customer transition to utilize the ESD and ESRS is incremental. See the high-level project plan for Customer Support Services scheduled dates

[R.2.3.13.2.4] **TE4-008**

The SP shall design, document, implement and maintain ESD/ESRS procedures that are consistent and complimentary with NASA's ITIL v3-aligned processes

[R.2.3.13.2.5] **TE4-009**

The SP shall implement an ESD and ESRS ITSM solution leveraging current NSSC IT infrastructure, staffing, and processes. The RFP response should identify those specific solutions that the SP will implement

[R.2.3.13.2.6] **TE4-010**

The SP shall design, configure, test and implement the IT support systems required to support TIER 1, TIER 0, and ESRS requirements. The major systems are described in Section 3.4, I3P ESD/ESRS Systems Management

[R.2.3.13.2.7] **TE4-011**

The SP shall train and staff the ESD with sufficient personnel to support an expected incremental volume of incidents as I3P contracts are transitioned on Day 1 of Customer Support operations

[R.2.3.13.2.8] **TE4-012**

(DRD) The SP shall utilize Interface Definition Agreements (IDAs) to define interfaces between the ESD and I3P contracts and the ESRS and the NEAR

[R.2.3.13.3.1] **TE4-013**

(DRD) The SP shall be responsible for defining, developing, and documenting t the interactions and interfaces between the I3P Contractors and the ESD/ESRS. This includes contacts, process touch points and information exchanges required for the Enterprise Service Desk to coordinate interaction with the I3P Contractors, including the following:

[R.2.3.13.3.2] **TE4-014**

Documentation of the roles and responsibilities of the ESD/ESRS for all ITIL processes that the ESD/ESRS and I3P Contractors will be using

[R.2.3.13.3.3] **TE4-015**

Documentation of how Incident / Problem information (Known Errors, Root Cause Analysis, and ESD Service Diagnosis Scripts) is exchanged, referenced and reported

[R.2.3.13.3.4] **TE4-016**

Documentation of escalation procedures and contact lists to be approved by the NSSC

[R.2.3.13.3.5] **TE4-017**

Documentation of the roles and responsibilities for each party (ESD/ESRS, I3P Contractors, and the SIM) related to fulfilling Service Requests

[R.2.4.1] **SuppRD-001**

Develop the ESD Notification Tool (ESDNT)

[R.2.4.1.1] **SuppRD-002**

This tool will be the repository for all data pertaining to ESD Notifications

[R.2.4.1.2] **SuppRD-003**

Notifications regarding the I3P Contract Service Outages will be the primary focus of this notification tool

[R.2.4.2] **SuppRD-004**

The ESDNT Messages may be widely disseminated or targeted to a specific customer base

[R.2.4.2.1] **SuppRD-005**

Content for the disseminated message is the responsibility of the sending I3P Contractor

[R.2.4.3.1] **SuppRD-006**

The I3P Contractor will gain access to the ESDNT by applying for an account via NAMS

[R.2.4.3.2] **SuppRD-007**

Once established with the role of "message submitter", the user will provide information pertaining to the notification via the TIER 0

[R.2.4.3.3] **SuppRD-008**

NASA employees and contractors will be able to subscribe to notifications via the TIER 0 [sic]

[R.2.4.4.1] **SuppRD-009**

Users will be able to subscribe to messages and messages will be distributed based on three (3) criteria: Center, Service and Priority

[R.2.4.4.2] **SuppRD-010**

The subscriber will be allowed to choose one, many, or all centers and services

[R.2.4.4.3] **SuppRD-011**

The Priority will be implemented as a "less than" selection. For example, if the user chooses a Priority of Medium, the user will receive messages that are of Priority Medium and High

[R.2.4.5.1] **SuppRD-012**

A Message Submitter may provide the NSSC with a message that is intended for a provided distribution list. This type of message is required when an outage is specific to certain users due to how the service is implemented. For example, NOMAD may need to send an outage message to all users whose email accounts are on a certain server—

information that is not contained within the ESD systems. The attachment will contain *@nasa.gov email addresses, one per line

[R.2.4.5.2] **SuppRD-013**

A Message Submitter may provide the NSSC with a message that is intended for users that have subscribed to this service. The subscribers will be chosen based on three (3) criteria: center, service and Priority as described above

[R.2.4.5.3] **SuppRD-014**

A Message Submitter may provide the NSSC with a message that is intended for all users. This type of message will be sent to all users at a given Center or Centers

[R.2.4.6.1] **SuppRD-015**

Once the message is submitted, an ESD Agent will perform a quality check on the message. If the message is not acceptable, for example, if the message contains spelling and grammatical errors, the ESD Agent will return the message to the Message Submitter

[R.2.4.6.2] **SuppRD-016**

The ESD Agents assigned to perform this quality check will be given a special role within the NSSC Remedy System. This role will allow the message to be automatically routed to the ESD Agent performing the quality check for review and distribution. This role will be obtained through NAMS

[R.2.4.6.3] **SuppRD-017**

Notifications provided by the ESDNT will be sent to the users' emails as established in the LDAP data and will be posted on the TIER 0 website using a web services interface

[R.2.4.6.4] **SuppRD-018**

Scheduled outages identified as a major event will be distributed on the following schedule: one message seventy-two (72) hours prior to the event, one message twenty-four (24) hours prior to the event and one message eight (8) hours prior to the event, as time permits based on the time the message is submitted for distribution

[R.4.1.0] **I3P-Checkbook-1**

The FCaRT application will support the I3P Business Office in monitoring funding available for I3P services, accruing and liquidating costs, reconciling I3P Service Provider Invoices, and reporting of P-Card transactions.

[R.4.1.1] **I3P-Checkbook-1.1**

Maintain the current available balance of funds by Cost Center.

[R.4.1.2] **I3P-Checkbook-1.2**

Provide Center Resource Approvers (CRAs) with a list of Cost Center codes available to the specific CRA for funding a service request during the service request approval process and notifying the CRA as to funds availability upon Cost Center Selection. CRAs will only have access to the Cost Centers identified in the NAMS request. CRAs will only be able to select Cost Centers with Funds based on the Funds Commitment Documents. If no data has been sent for that particular Cost Center, the CRA cannot select it for funding the order.

[R.4.1.3] **I3P-Checkbook-1.3**

Decrementing available funding upon CRA approval.

[R.4.1.4] **I3P-Checkbook-1.4**

Support the I3P Business Office monthly Accrual and Liquidation process.

[R.4.1.5] **I3P-Checkbook-1.5**

Support the I3P Business Office monthly Vendor Invoice Reconciliation process.

[R.4.1.6] **I3P-Checkbook-2.1**

In performing these processes, FCaRT will interface with the following systems:

• SAP via daily file downloads of funding information.

[R.4.1.7] **I3P-Checkbook-2.2**

In performing these processes, FCaRT will interface with the following systems:

• Real Time interaction with ESRS for funding data associated with order activity.

[R.4.1.8] **I3P-Checkbook-2.3**

In performing these processes, FCaRT will interface with the following systems:

• Real Time communications with the Service Definition Repository for service rates, terms and conditions and order activity.

[R.4.1.9] **I3P-Checkbook-2.4**

In performing these processes, FCaRT will interface with the following systems:

• I3P Service Providers via downloads of electronic copies of monthly invoices.

[R.4.2.1] **I3P-Checkbook-2.1.0**

The application shall provide the processes and procedures to support the daily download of I3P funding actions for update of FCaRT balances.

[R.4.2.2] **I3P-Checkbook-2.1.1**

At a minimum, the following information will be extracted and maintained in FCaRT:

Fund Center - Identifies the funding Center Code Cost Center - Aggregate: Includes the Fund Center and an alphanumeric Cost Center Identifier Work Breakdown Structure - Unique Identifier of the Cost Center Activity Fund - Identifies the source of funding Funding Date - Date of the Funds Commitment Document Funds Commitment Document Number - Identifies the document that authorized the funding action Funds Commitment Document Line Item - Line item number of the Funds Commitment Document that authorized the funding action General Ledger Account Code - SAP General Ledger account doce associated with this funding line item Advance Amount - Dollar value of the funds authorized by this action

[R.4.2.3] **I3P-Checkbook-2.1.2**

The file will contain all actions since inception.

[R.4.2.3.1] **I3P-Checkbook-2.1.3**

Software processes shall filter input and only load records with new combinations of Funds Commitment Document Number and Funds Commitment Document Line Item.

[R.4.2.4] **I3P-Checkbook-1.1.1**

Each Cost Center represents a unique "Bank Account" with its own distinct checkbook and balance.

[R.4.2.5] **I3P-Checkbook-1.1.2**

Funding actions represent deposits to FCaRT.

[R.4.2.6] **I3P-Checkbook-1.1.3**

There is the potential for negative deposits.

[R.4.3.1] **I3P-Checkbook-2.2.1**

Standard or Simple Orders: These orders are based on published vendor catalog services and result in one or more standard services being provided at published vendor rates and charged to a single cost center. Standard orders may be priced as a one-time purchase, a recurring monthly charge for a fixed period of time, or as a recurring monthly charge until service termination.

[R.4.3.2] **I3P-Checkbook-2.2.2**

Bundled Orders: More than one service bundled to simply the ordering process. The individual items within the bundle are based on the published vendor catalog services and charged to a single cost center.

[R.4.3.3] **I3P-Checkbook-2.2.3**

Quoted Orders: These orders are for non-standard services and involve requesting a quote and subsequently ordering the service at the quoted price. A single cost center will pay for the service, but it is possible that the service may have a complex payment schedule (either multiple months and/or varying payments). The key aspect is that each order has a "custom" pricing schedule.

[R.4.3.4] **I3P-Checkbook-2.2.4**

Base Services: A few (one or two) orders involve services that are spread across I3P organizations to agreed Cost Centers at a rate specific to the cost center.

[R.4.3.5] **I3P-Checkbook-2.2.1.1**

For Standard Orders, the application shall provide the processes and procedures to support providing authorized CRAs with a list of approved Cost Centers to fund a service request.

[R.4.3.5.1] **I3P-Checkbook-2.2.1.2**

The CRA will make a selection and FCaRT shall respond with a message indicating the availability of funds.

[R.4.3.5.2] **I3P-Checkbook-2.2.1.3**

When calculating whether funds are available for the given order against the selected Cost Center, FCaRT shall determine funds available at the total Cost Center level.

[R.4.3.5.3] **I3P-Checkbook-2.2.1.4**

On CRA approval, the system shall decrement available funds by the amount of the order and record the detailed order information.

[R.4.3.5.4] **I3P-Checkbook-2.2.1.5**

Allow orders to be cancelled until CRA approval. Once the I3P contractors define their cancellation policies, the SP will recommend a solution to communicate the cancellation to FCaRT for reversal of the effect of the CRA approval.

[R.4.3.6] **I3P-Checkbook-2.2.3.1**

For Quoted Orders, the application shall provide the processes and procedures to support entering custom payment allocations that spread the quoted price over time in addition to the functions provided for standard orders.

[R.4.3.6.1] **I3P-Checkbook-2.2.3.2**

The CRA will specify the payment amounts by month and validate the total equals the amount of the quoted order.

[R.4.3.7] **I3P-Checkbook-2.2.4.1**

For Base Services, the system shall provide screens, processes, and procedures for authorized I3P personnel to enter a schedule of cost centers and monthly billing rates to be accrued monthly into FCaRT under a specific order and service name.

[R.4.4.1] **I3P-Checkbook-1.4.1**

The I3P Business Office is required to liquidate cost center funds each month in a collaborative process with the Centers. Briefly the process involves generating accruals for all open active orders based on the price of the service, distributing the accrued price to cost center funds using Center-assigned rules, reviewing allocations and resolving issues with the Centers, posting reconciled valued to SAP, and making requisite adjustments to FCaRT.

The application shall provide screens, processes, procedures and outputs to:

[R.4.4.2] **I3P-Checkbook-1.4.1.1**

Allow Resource Analysts to input and maintain a Cost Center's Fund Liquidation Method (allocate sequentially or allocate by percentage) and the [Cost Center/ Work Breakdown Structure/Fund ] Fund Liquidation Value (numeric field representing the sequential order [e.g., 1, 2, 3,n] or the percentage allocation [e.g. 20%- 30%-50%] for that Cost Center/WBS/Fund combination).

[R.4.4.3] **I3P-Checkbook-1.4.1.2**

Initiate processes to generate current period accruals for all open recurring Standard Orders, Quoted Orders, and Base Orders and distribute the order values to funding in a two stage process: first based on available funds in the [Cost Center/ Work Breakdown Structure/Fund] according to the Fund Liquidation Option and Fund Liquidation Value and then to individual [Funds Commitment Document Number/ Funds Commitment Document Line Item] in order by [Funds Commitment Document Number/ Funds Commitment Document Line Item]. The last [Funds Commitment Document Number/ Funds Commitment Document Line Item] could go negative and this should be flagged as a reconciliation issue.

[R.4.4.4] **I3P-Checkbook-1.4.1.3**

Initiate processes to include accrual information and status in the calculation of available funding for a specific Cost Center. FCaRT shall monitor which orders have been accrued, which accrued orders have been reconciled as invoiced by the I3P Service Provider, and which orders have been adjusted through the reconciliation.

[R.4.4.5] **I3P-Checkbook-1.4.1.4**

Provide filterable outputs to facilitate the interaction of CRAs and the I3P Business Office. Initially this may be via spreadsheet outputs (e.g., filter by Fund Center, filter by Cost Center).

[R.4.4.6] **I3P-Checkbook-1.4.1.5**

Provide screens, processes, and procedures to support resolution of funding issues by authorized personnel.

[R.4.4.7] **I3P-Checkbook-1.4.1.6**

Provide outputs in a form and format to facilitate entering corrected data into SAP. (reference the Checkbook sample.xlsx file)

[R.4.5.1] **I3P-Checkbook-1.5.1**

The I3P Business Office is required to process and reconcile electronic copies of I3P Service Provider monthly invoices. Each service provider may have different invoicing periods and submission schedules. The process essentially involves comparing invoice line item detail to corresponding order/service accrued values and identifying and reconciling differences. The application shall provide screens, processes, procedures, and outputs to (R.4.5.2 through R.4.5.5):

[R.4.5.2] **I3P-Checkbook-1.5.2**

Upload electronic monthly I3P Service Provider invoices. The timing, format, and delivery mechanisms will be negotiated between the I3PBO and the I3P Service Providers.

[R.4.5.3] **I3P-Checkbook-1.5.3**

Maintain I3P Service Provider specific calendars that define and relate vendor billing cycles to NASA financial periods to facilitate matching orders by time period.

[R.4.5.4] **I3P-Checkbook-1.5.4**

Match order and service detail accrued value and invoiced values identifying value matches/mismatched values/and mismatched records.

[R.4.5.5] **I3P-Checkbook-1.5.5**

Produce user filterable outputs of the results and mechanisms to automate the acceptance of matches, the generation of checkbook adjustments (to the funds originally impacted by the accrual), and the disposition of mismatched records.

[R.4.5.6] **I3P-Checkbook-1.5.5.1**

The matching process shall automatically determine orders where the order number and amount from the I3P Service Provider invoice match exactly.

[R.4.5.7] **I3P-Checkbook-1.5.5.2**

The matching process shall also identify orders where these values do not match exactly. The application shall provide screens and functions that will present the unmatched items to the I3P Business Office and allow for manual reconciliation and adjusting entries, to include mass adjusting entries as specified by the I3P Business Office.

[R.4.6.1] **I3P-Checkbook-2.5.1**

Support for periodic verification of FCaRT balances to SAP funds. It is necessary to ensure that the FCaRT balances reconcile to SAP. The application shall provide screens, processes, and outputs to produce summaries of fund balances suitable for comparison with SAP reports.

[R.4.6.2] **I3P-Checkbook-2.5.2**

This shall include processes to query and extract funding information at the Fund Center, Cost Center, WBS, and Fund levels.

[R.4.7.1] **I3P-Checkbook-2.6**

Training aids will be developed on the various functionality, reporting, and ad hoc capabilities within FCaRT.

[R.4.7.2] **I3P-Checkbook-2.6.1**

In addition, training will be provided to all Center personnel who will be using the tool.

[R.4.8.1] **I3P-Checkbook-2.7.1**

The Approvers will gain access to the ESRS by applying for an account in the Network Account Management Systems (NAMS). NAMS work flow processes will assure approval is granted to the appropriate employees. The NSSC IT Team will provide for the provisioning of these requests in ESRS.

[R.4.8.2] **I3P-Checkbook-2.7.2**

Once an approver is granted access to ESRS, the approver will be selectable from a pull-down list in ESRS. These lists will be limited based on the user's credentials ordering a service.

[R.4.8.3] **I3P-Checkbook-2.7.3**

Subsequent to approval, the Org. Approver will select the IT and/or Center Resource Approvers.

[R.4.8.4] **I3P-Checkbook-2.7.4**

The SP shall ensure the ESRS only displays identified Center Resource Approvers for the Org. Approvers to select from.

[R.4.8.5] **I3P-Checkbook-2.7.5**

When a Center Resource Approver requests an approval account through NAMS, the Cost Center(s) associated with this approver will be required before the Center Resource Approver can be authorized.

[R.4.8.6] **I3P-Checkbook-2.7.6**

The Center Resource Approver will be allowed to approve or reject the order.

[R.4.8.7] **I3P-Checkbook-2.7.7**

The SP shall ensure the checkbook is implemented in time for testing and readiness reviews in advance of ACES go-live (currently Nov. 1, 2011).

[R.5.1.1.1a] **Use approval queues in ESRS**

ESRS should use a queue based approval process with following atributes: 1) approval process based on the organization funding the SR, 2) approvers identified in NAMS, 3) approver names of "Org Approver", "Resource Aprover", & "IT Approver", 3) include a Super Approver capability, and 4) include backup, or alternate, approvers.

[R.5.1.1.1a.1]

Existing Manager Approver requirements shall be modified as follows. Title "Manager Approver" shall be changed to "Org. Approver" within the ESD, ESRS, NAMS, and SDR. NASA users who request the Org. Approver role in NAMS will designate the Org. for which they may approve service requests, and will also designate whether they are an alternate approver for any other established Org. Approvers.

[R.5.1.1.1a.2]

NASA users who originate requests in the ESRS will verify their Org. prior to submission of their request. The default view will be the Org. identified in the LDAP. Users shall have the ability to change the Org. for any request using a drop-down of all Orgs. by Center / Mission Directorate. This change will affect the individual order only, and will not require an update to the Remedy people data or to the LDAP. Selection of an Org. will generate a second drop-down showing all Org. Approvers provisioned for that Org. for the requestor to choose from. The selected Org. Approver (and any provisioned Org. Approvers within the same Org.) will receive an email from the Remedy system notifying them of the pending request.

[R.5.1.1.1a.3]

Existing IT Approver requirements shall be modified as follows. NASA users who request the IT role in NAMS will designate the Org. for which they may approve service requests, and will also designate whether they are an alternate approver for any other established IT Approvers. The selected IT Approver (and any provisioned IT Approvers within the same Org.) will receive an email from the Remedy system notifying them of the pending request.

[R.5.1.1.1a.4]

Existing Financial Approver requirements shall be modified as follows. NASA users who request the Center Resource Approver role in NAMS will designate whether they are an alternate approver for any other established Center Resource Approvers. The selected Center Resource Approver (and any provisioned Center Resource Approvers within the same Org.) will receive an email from the Remedy system notifying them of the pending request.

[R.5.1.1.1a.5]

The SP shall create a "Super Approver" role within the ESRS and Electronic Checkbook. Super Approvers will provision their roles through NAMS. Super Approvers will be able to designate multiple Orgs within NAMS for which they may approve service requests, and will also designate whether they are an alternate approver for any other established Super Approvers. Super Approver roles shall be established for all three types of Approvers - Org., IT, and Center Resource. Super Approvers (and any provisioned alternates) will receive an email from the Remedy system notifying them of all pending requests for their Orgs.

[R.5.1.1.5] **"On Behalf of"**

Allow incidents and service requests to be opened on behalf of someone (currently designed that you can put in a request on behalf of someone, but you will not be able to monitor on behalf of). Capability should allow a user to check on the status of any tickets, including those submitted by others. The ability to status tickets submitted by others should be restricted by organizations,; except for Super Users who should see all tickets

[R.5.1.1.7b] **Perform Configuration Management**

Fully implement Configuration Management. ESD is to ensure that they are the authoritative data source for NASA's I3P configuration data (configuration items and elements) and maintains a CMDB per the requirements in the PWS and the CF-PWS. The SP shall support a sampling of I3P Configuration Items associated with each Incident, Problem or Service Request processed by TIER 2 contractors This sampling rate is anticipated to be 5%. The SP shall be responsible for following up with I3P Contractors to rectify inaccuracies in Configuration Item records discovered during sampling or during more comprehensive audits requested by the SIM.

[R.5.1.1.7b.1]

Perform configuration management in accordance with "NASA IT Configuration Management Process Document Version 2.0," dated March 31, 2011.

[R.5.1.1.8] **Real-time customer survey**

Provide capability to perform real-time surveys on all tickets created by ESD. Develop a process where surveys for tickets with one or more child ticket ask all appropriate questions.

[R.5.1.1.8.1]

The ESD shall implement the Remedy survey capability in lieu of using the existing Inquisit survey tool.

[R.5.1.1.8.2]

Customer satisfaction surveys shall be issued for any ticket opened by REMEDY where the ticket is for an ITIL-defined user, and shall be automatically generated to users whenever a ticket reflects RESOLVED status.

[R.5.1.1.8.3]

Customer surveys for incidents shall include questions specific to the means of entry (Tier 0 or Tier 1) and the level of resolution (Tier 1 or Tier 2).

[R.5.1.1.8.4]

Survey questions for Tier 2 response may be unique to each Service Provider.

[R.5.1.1.8.5]

Incidents created at Tier 2 shall also be surveyed unless there is no end-user associated with the incident. An example of a Tier 2 incident to be surveyed is the "Hey You" or "Drive-By" incident. An example of a Tier 2 incident not to be surveyed is maintenance or repair identified by Tier 2 for Tier 2.

[R.5.1.1.8.6]

Surveys for service requests that require responses from two or more vendors shall include questions that address all vendors involved in resolution of the request.

[R.5.1.1.8.7]

I3P contractors shall define their survey questions, with Service Executive/SIM approval.

[R.5.1.1.8.8]

The Service Provider shall post all survey results for the I3P contract to Remedy Dashboards & Analytics without further analysis. Existing D&A licenses shall be used by defined license-holders to access this data.

[R.5.1.1.8.9]

Surveys are not to mask any ticket information. Users should not expect confidentiality or anonymity. When the authorized I3P SP reviews a survey all ticket information shall be available.

[R.5.1.1.8.10]

Upon resolution of the ticket, an automatic email will be generated that will query the user for confirmation of resolution as well as inviting them to take the satisfaction survey. This email will include ticket number and subject of the incident. The Service Provider shall present a solution that ensures if a user does not believe a ticket was properly resolved then the ticket is not closed and is automatically returned to the ESD for consideration. Users will not be provided a means to complete the survey if they indicate the ticket was not properly resolved.

[R.5.1.1.15] **Warm handoff to I3P and non I3P SP**

ESD is to work a "warm handoff" approach with the Tier 2 service providers and the Center (non-I3P) service providers to improve customer engagement (possible impact to time-to-answer KPI) NOTE: Per agreement with the ESD SE tier 3 was removed

[R.5.1.1.15.1]

The Service Provider shall provide "warm handoffs" for I3P and non-I3P calls in accordance with Knowledge Articles to be provided by I3P and non-I3P help desks.

[R.5.1.1.15.2]

Warm Handoffs to Tier 2 will be only provided for Severity 1 and policy VIP calls.

[R.5.1.1.15.3]

Warm handoffs for contacts received via Tier 0 or email will be executed IAW established knowledge articles as soon as the contact is identified as a Severity 1 incident or a policy VIP. Non-I3P contacts received via Tier 0 or email will also be handled IAW established knowledge articles with the exception that telephonic contact with non-I3P providers will not be required (email / Tier 0 response in kind will be provided in lieu of the warm handoff).

[R.5.1.1.17] **Provide Automatic Reconciliation in Electronic Checkbook**

Fully functional checkbook capability w/ use of cost centers vice WBS along with approval queues vice individuals.

[R.6.1] **P-CARD-00**

The ESRS shall accept P-Cards as defined in these requirements.

[R.6.1.1] **P-CARD-01**

Service Definition Repository (SDR) workflow will include a field for Service Exec/Designee to indicate whether NASA purchase cards will be accepted for the service once it is published to the Enterprise Service Request System (ESRS). Purchase cards will only be accepted for services with a one-time payment option; they will not be accepted for amortized purchases.

[R.6.1.2] **P-CARD-02**

Bundles that contain only services for which purchase cards will be accepted will also allow purchase cards to be used.

[R.6.1.3] **P-CARD-03**

Requestors will be able to indicate at the time a request is initiated in the ESRS whether a purchase card is to be used. Org. Approvers will be able to indicate at the time a request is approved whether a purchase card is to be used. An indication of "yes" by the Org. Approver will require the Org. Approver to select which purchase cardholder will be processing the request from a pull-down of NAMS-provisioned purchase cardholders. The default view will be the requestor's Center and all Mission Directorate approvers. Additionally, the Org. Approver must select an IT approver from a pull-down with the same default view as above; the default view will show the NAMS-identified IT approvers.

[R.6.1.4] **P-CARD-04**

The existing NAMS provisioning for purchase cardholders and IT & Org. Approvers will be examined for use by the ESRS, and will be retained or augmented as necessary.

[R.6.1.5] **P-CARD-05**

Approval workflow for P-card orders does not differ from defined ESRS/FCaRT approval workflow with the following exceptions and clarifications:

The P-card Approver role replaces the Center Resource Approver.

Both Org. and IT Approvers are required on all P-card orders.

Org. Approver option for P-card selection as per R.6.1.3.

See R.6.1.9 for specific requirements regarding "on behalf of" P-card orders.

[R.6.1.6] **P-CARD-06**

Org. and IT Approvers will have a means to indicate approval or disapproval of a request. Disapproved requests will have a mandatory field for the approver to indicate the reason for disapproval. Disapproval will result in the request being closed with notification back to the requestor.

[R.6.1.7] **P-CARD-07**

Purchase cardholders (who approve) will have a means to indicate whether the request is accepted or rejected. Requests that are accepted means the request can be processed. ESRS will have fields for the purchase cardholder to enter: a. Their name as it appears on the purchase card (mandatory field) b. Their card number (mandatory field) c. The card expiration date (mandatory field) d. The security code from the back of the card (mandatory field) e. Purchase card order log number (mandatory field) f. Ship-to information (mandatory field) – name, address, phone, email Fields a, e, and f will be retained by the system for each order in accordance with item 11 below. Fields b, c, and d will be passed to Tier 2 for fulfillment but will not be retained at Tier 1 once the order has been successfully transmitted to Tier 2. (The last four digits of field b will be retained to facilitate order identification.)

Requests that are rejected by the purchase cardholder will have a mandatory field for the Purchase card holder to indicate the reason for rejection. Rejected requests will result in the request being closed with notification back to the requestor.

An optional free-text field to indicate the requested WBS will also be displayed.

[R.6.1.8] **P-CARD-08**

Orders will be passed to the designated vendor using a secure means that meets current NASA requirements for passing credit card information across the internet (see the embedded document, "PCI items.doc" for requirements). Pending the ACES Project Catalog (APC) and B Seat solutions for ACES, we do not know if these vendors will be at Tier 2 or elsewhere, or whether they will be required to accept Remedy tickets for service requests.

[Note: "PCI Items.doc" is reproduced as Appendix F of the Requirements Document.]

[R.6.1.9] **P-CARD-09**

Purchase cardholders may also initiate orders in the ESRS for themselves or on behalf of others. When a requestor who is also a purchase cardholder checks "yes" indicating a purchase card is to be used, the system will see they are also a purchase cardholder and will display the screen asking for their purchase card information (defined in R.6.1.7). They will not receive a subsequent notification from Remedy asking to approve the request.

Note: The request still goes to the Org. and IT Approvers.

[R.6.1.11] **P-CARD-11**

The electronic checkbook will have a reconciliation screen for purchase cardholders to reconcile orders. All open and fulfilled orders will be displayed. Purchase cardholders will use this information to help them reconcile orders within P-Card Web Solution System. History of orders will be viewable by purchase cardholders in ESRS for a minimum of three years after request fulfillment (see R.6.1.7). The checkbook will have an optional field for purchase cardholders to indicate whether an order has been reconciled in P-Card Web Solution; a check in this box will move the checked order from a "pending" status to a "reconciled" status. (For sizing purposes, the current quantity of purchase cardholders in NASA is approx. 2400.)

[R.6.1.12] **P-CARD-12**

Reporting requirements: In addition to the purchase cardholder views available in the electronic checkbook (R.6.1.11), all fields associated with purchase card orders will be available for self-service queries in Remedy Dashboards & Analytics (D&A). This includes all fields defined in the SDR for each service ordered, requestor, requested on behalf of, all approvers, and dates/times for each action associated with the purchase card purchase (request, approval, receipt at Tier 2, fulfillment – as captured by Remedy). These will not be accessible to all purchase cardholders due to licensing restrictions, but will be available to currently planned D&A license holders (Service Offices, SIM, resource Analysts, etc.)

Note: Data defined for retention in R.6.17 above will be passed to D&A.

[R.6.1.13] **P-CARD-13**

The Service Provider will apply the necessary resources to ensure testing and operational readiness are completed prior to delivery. As an OCIO priority requirement there is little to no room for schedule slippage. The ESRS will begin accepting purchase card orders beginning with ACES go-live (currently scheduled for Nov. 1, 2011).

[R.6.2.1] **BEHALF-01**

The SP shall provide the capability to create Incidents using "On behalf of" at Tier 0 for ESD and for Tier 1 regardless of contact method before the first I3P go-live.

[R.6.2.2] **BEHALF-02**

The SP shall allow any user to create an Incident ticket for any other user by presenting in a user friendly format at the Tier 0 interface.

[R.6.2.3] **BEHALF-03**

The SP shall immediately notify via a screen message that the incident is accepted and tell the user to expect additional information via email.

[R.6.2.4] **BEHALF-04**

The SP shall immediately notify via system-generated email the person entering the incident the ticket number and the anticipated time for processing.

[R.6.2.5] **BEHALF-05**

The SP shall provide status of an "on behalf of" on TIER 0 for the person placing the order.

[R.6.2.6] **BEHALF-06**

The SP shall ensure the "on behalf of" is able to flag and immediately escalate for processing the request for "policy VIPs". Note the person that the order is being placed on behalf of must be a policy VIP. Self-status will be available via Tier 0.

[R.6.2.7] **BEHALF-07**

The SP shall develop a user guide for "on behalf of" to include the procedure for selecting the appropriate approver(s) for "on behalf of" and personnel on TDY.

[R.6.2.8] **BEHALF-08**

The SP shall recommend to government what data elements should be tracked for "on behalf of" (NLT August 2011).

[R.6.2.9] **BEHALF-09**

The SP shall develop a user guide for "on behalf of".

[R.6.2.10] **BEHALF-10**

The SP will provide status at TIER 0 for the person the order was placed on behalf of.

[R.6.2.11] **BEHALF-11**

The SP shall immediately notify via system-generated email the person placing the order and the person the order was placed for when an order is submitted on behalf of.

[R.6.2.12] **BEHALF-12**

The SP shall provide monthly metrics for "on behalf of" based on the decision made from R.6.2.8.

[R.6.2.13] **BEHALF-13**

The SP shall provide the capability to place an "order on behalf of" in the ESRS on or before the first I3P go-live date.

[R.6.2.15] **BEHALF-15**

The SP shall immediately notify via a screen message that the order is accepted and telling the user to expect additional information via email.

[R.6.2.16] **BEHALF-16**

The SP shall allow the requestor (either self-serving or ordering on behalf of) the ability to choose the Center or Mission Directorate that will allow the appropriate Org./IT/Center Resource Approver to be selected. Selection options for employees who are on detail assignments or extended TDY shall be made available.

[R.6.2.17] **BEHALF-17**

The SP shall notify via system-generated email the person placing the order and the person the order was placed for when an order is submitted on behalf of.

[R.6.2.18] **BEHALF-18**

The SP shall provide status of an "order on behalf of" on TIER 0 for the person placing the order.

[R.6.2.19] **BEHALF-19**

The SP shall place an "order on behalf of" VIP callers in the event of an urgent situation. Note the person that the order is being placed on behalf of must be a VIP. The workload for this activity is not known at this time thus the SP should include this in the metrics to track and report. Self-status will be available via Tier 0.

[R.6.2.20] **BEHALF-20**

The SP shall recommend to government what data elements should be tracked for "on behalf of" (NLT August 2011).

[R.6.2.21] **BEHALF-21**

The SP shall develop a user guide for "order on behalf of" to include the procedure for selecting the appropriate approver(s) for "order on behalf" of and personnel on TDY.

[R.6.2.22] **BEHALF-22**

The SP will develop a user guide for requesting the following NAMS roles: 1. Super Approver (Org., IT, and Center Resource)

2. Org. Approver 3. Center Resource Approver 4. IT Approver 5. I3P Contractor Approver 6. I3P Service Office Approver 7. SIM Approver

8. Resource Analyst

[R.6.2.23] **BEHALF-23**

The SP will provide status at TIER 0 for the person the order was placed on behalf of.

[R.6.2.24] **BEHALF-24**

The SP shall provide monthly metrics for "order on behalf of" based on the decision made from R.6.2.20.

**3 Candidate Requirements**

This section contains Candidate Requirements for the Enterprise Service Desk project. Candidate Requirements are not considered mere changes from the OCIO's Change Management processes/boards. Nor can Candidate Requirements be implemented by an administrative Technical Direction Letter (TDL). Candidate requirements may or may not fundamentally increase the scope or cost of the Enterprise Service Desk. A contract mod may not be required if/when the identified requirement is found to be covered by existing contract language directly or by implication. Enhancements to the system or process do not constitute a contract change. They are OCIO requirements which have been formally proposed but are not yet part of the NSSC contract. When Candidate Requirements become part of the NSSC contract through a contracting action, they are moved to Section 2 of this document. Readers are cautioned to read these as future or "to be" requirements, while the requirements in previous sections are or will be executed after development and deployment. The contents of this section are not meant to represent all proposed requirements on the project, but rather those which are being actively researched at the time of publication based on input from the OCIO's ESD Service Executive. This clarification to the reader is also to ensure that it is understood the requirement has not necessarily been well-vetted and thus might be resolved by a change process or TDL. Thus this section is much more informational than is normally seen in a requirements document.

[R.5.1.1.6a] Incident and Request Management

Incident and Request Mgmt. per PDM for ITSM Processes submitted on 5-4-11. ESD is to implement the Service Request Management Process per the latest Service Request Management Process documented by NASA. This should include the clarifications for the SR Approval and Funding gaps identified in the attachments.

[R.5.1.1.16] Perform Incident Management

Provide hierarchical and functional escalations based on impact and urgency (4X4). ESD shall ensure during the lifecycle of a ticket that should no update be made to the ticket that an automatic polling to the ticket owner will occur at 75% and 95% milestones. Additionally, if a user calls the ESD requesting status on a ticket in addition to describing how ESD's Tier 0 self service works the ESD agent will also make a request for update to the ticket as per the ESD's SOP. The SP shall assign a prioritization code to the Incident and advocate on behalf of the customers

[R.5.1.1.16a] Perform Incident Management

Manage and shepherd the incidents till closure

[R.5.1.1.20] Create Tier I tickets at Tier II

Tier 2 capability to submit a new incident in the Tier 2 system that will be propagated to Tier 1 and CMDB. (Current ESD assumption is that Tier 2 would enter the ticket to Tier 0/1 and it would be escalated and then they could work it from the Tier 2 system)

[R.5.1.1.22] Bulk upload

Provide capability for bulk upload of initial data for service request (e.g. ACES seat replacement). Provide capability for bulk upload of configuration data in the CMDB where end-user and billing information is required (NICs current configuration data). Provide capability for the initialization of the CMDB attributes.

NOTE: The SP is to determine the means to import data into Remedy as required by the system.

[R.5.1.1.23] Develop an authoritative IDA

The SP shall utilize Interface Definition Agreements (IDAs) to define interfaces between the ESD and I3P contracts.

[R.5.1.1.29] Develop solutions to the CF-PWS

The SP shall adhere to NASA Service Level Management (SLM) policies as described in the Cross-Functional Performance Work Statements (CF-PWS) for all applications operations and implementation activities. SLM policies include, but are not limited to, the assignment and review of Severity Levels for incoming service requests, the proactive monitoring of performance metrics, the implementation of action plans in the event of lagging performance, and proactive communication mechanisms to inform the NSSC of any issues associated with Service Level performance.

[R.5.1.1.31] Provide Enterprise Service Desk Tier II

ESD/ESRS SUPPORT SYSTEMS MANAGEMENT- labor and ODCs required to provide core-level DBA, Sys. Admin. support, IT security, patch management, license management for IT systems, databases, and the communications infrastructure supporting the ESD/ESRS.

[R.5.1.1.56] Network failure notification

Outage notification capability in the event of network failures

[R.5.1.1.57] Group Moves

Expand existing "On Behalf Of" functionality to allow requestors to select multiple "On Behalf Of" customers when originating Change / Delete service requests at Tier 0. Requestors will be presented with a default selection inclusive of all CI's assigned to each customer in the CMDB, with the option to expand the view and select/deselect assigned CI's for each "On Behalf Of" customer in the Group Move. The Service Provider will recommend an upper limit for the number of customers per each Group Move request based on system design limitations. For Group Moves larger than the Government-approved upper limit, the Service Provider will provide a formatted spreadsheet via online access so NASA users can order a Group Move service. The Service Provider will provide a template for this spreadsheet and include it in the published service for requestor access. The provided spreadsheet should (after downloading) detail the Group Move spreadsheets instructions. Once complete users will provide the spreadsheet back via Tier 0 (assumes uploading the template spreadsheet). Populated spreadsheets that are attached to approved service requests will trigger a Bulk Order for the Service Provider to import at ESD Tier 2. The SP is responsible for performing a data integrity check before the data enters the ticketing system. Resolution of Group Move requests will trigger a customer satisfaction survey to each customer impacted by the Group Move. The Service Provider will recommend metrics to be displayed at Dashboards & Analytics for Group Moves NLT 45 days after this requirement is levied on the SP.

## APPENDIX A – PROJECT AUTHORITY, GOVERNANCE STRUCTURE, MANAGEMENT STRUCTURE AND IMPLEMENTATION APPROACH

[Excerpted from the ESD Project Plan, signed June 24, 2010.]

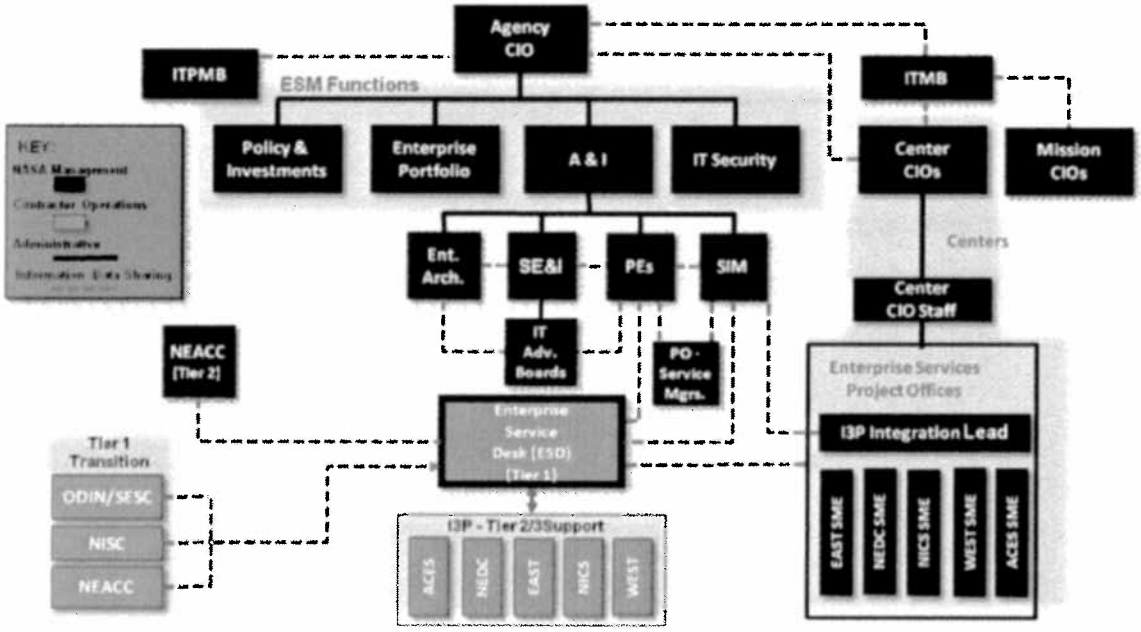
The Office of the Chief Information Officer (OCIO) exercises authority through both the Project Executive (PE) and the Service Integration Management (SIM) office. The NASA Shared Services Center (NSSC) exercises authority over the ESD/ESRS through its Chief Information Officer (CIO), Project Manager, Contracting Officer, and the COTR for the project. Reporting and coordination flow between the NSSC via its Project Manager and CIO to both the PE and the SIM, and then to the OCIO.

The Project Manager is responsible for coordinating the project locally with NSSC management, the CO and COTR, and the service provider, and agency-wide with the OCIO, NASA Centers, and other stakeholders. The PE resides in the Architecture & Infrastructure Division, is the service owner, and is responsible for budgeting. The SIM is responsible for managing the OCIO ITIL processes, SLA compliance monitoring and conflict resolution between the I3P contracts in regards to service levels. The Agency level governance specified in the I3P Program Commitment Agreement is incorporated by reference.

Decision authority is held jointly by the NSSC and OCIO. The Contracting Officer has final decision authority on contracting issues. Issues regarding scope must be worked between the Project Manager and the Project Executive. Cross-functional issues with the I3P contracts will be worked by the OCIO and the SIM.

Governance is provided by the IT Project Management Board (ITPMB) during the transition phase, and by the IT Management Board (ITMB) during the operations phase. Stakeholders (Project Design Teams, Center CIOs, etc.) associated with the five I3P contracts provided input during formulation, and will continue to provide feedback during the transition and operations phases. Once the I3P contracts have been awarded, coordination efforts will begin with the five vendors chosen in order to ensure seamless delivery of service across the Agency. The SIM will act as a coordinating office for cross-functional issues involving the ESD/ESRS and I3P contractors.

# OCIO Organizational Authority Structure




1

**APPENDIX B : ESD Performance Requirements (SLIs and KPIs)**

Appendix B is PWS Technical Exhibit #2. This has been moved to the body of this document, R.2.3.11.1 through 2.3.11.15.

**APPENDIX C: ESTIMATED CALL VOLUMES**

[Supplemented by Technical Direction Letter #2, 4/15/11 (q.v).]

**APPENDIX D: ACRONYMS**

ACD – Architectural Control Document

ACD – Automated Call Distributor

ACES – Agency Consolidated End-User Services

AOPNS – Activity and Outage Posting and Notification System

ARC – Ames Research Center

ASA – Average Speed to Answer

BCP - Business Continuity Plan

CF-PWS – Cross Functional Performance Work Statement

CI – Configuration Item

CIO – Chief Information Officer

CMDB – Configuration Management Database

CONOPS – Concept of Operations

COOP – Continuity of Operations Plan

CSI – Continuous Service Improvement

DFRC – Dryden Flight Research Center

DRD – Date Requirement Document

DSO - Distributed Server Option

EA – Enterprise Architecture

EAST - Enterprise Applications Services Technologies

ESD – Enterprise Service Desk

ESM – Enterprise Service Management

ESRS – Enterprise Service Request System

ES&I - Enterprise Services & Integration

FAD - Formulation Acquisition Document

FAQs - Frequently Asked Questions

GSFC – Goddard Space Flight Center

GRC - Glenn Research Center

GISS - Goddard Institute for Spaces Studies

HQ - Headquarters

I3P – IT Infrastructure Integration Program

IDA – Interface Definition Agreement

IMS – Incident Management System

ITIL – Information Technology Infrastructure Library

IPCC – IP Contact Center (Cisco)

ITMB – IT Management Board

ITSM – IT Service Management

IVR – Intelligent Voice Response

IV&V - Independent Verification and Validation

IT PMB - IT Project Management Board

ICAM - Identity Credentialing and Management

ICD - Interface Control Document

JPL – Jet Propulsion Laboratory

JSC – Johnson Space Center

KPI - Key Performance Indicator

KSC – Kennedy Space Center

LaRC – Langley Research Center

MFR – Mission Focus Review

MSFC – Marshall Space Flight Center

MAF - Michoud Assembly Facility

NEACC - NASA Enterprise Applications Competency Center

NEAR – NASA Enterprise Architecture Repository

NEDC – NASA Enterprise Data Center

NICS – NASA Integrated Communications Services

NISC – NASA Information Support Center

NISN – NASA Integrated Services Network

NODIS – NASA Online Directives Information System

NOMAD - NASA Operational Messaging & Directory Service

NPD – NASA Policy Directive

NPR – NASA Procedural Requirements

NSSC – NASA Shared Services Center

NASA - National Aeronautics and Space Administration

OCIO – Office of the Chief Information Officer

ODIN – Outsourcing Desktop Initiative for NASA

OLA – Operating Level Agreement

OSC2 - OCIO Strategic Communications Committee

PII – Personally Identifiable Information

PWS – Performance Work Statement

RCA - Root Cause Analysis

SACM - Service Asset and Configuration Management

SIM – Service Integration Management

SLA – Service Level Agreement

SLI – Service Level Indicator

SLM – Strategic Level Management

SMC – Strategic Management Council

SMO – Strategic Management Office

SOC – Security Operations Center

SP – Service Provider

SPOC – Single Point of Contact

SSC – Stennis Space Center

UC – Underpinning Contract

WEST – Web Enterprise Services Technologies

WFF – Wallops Flight Facility

WSC - White Sands Complex

WSMR - White Sands Missile Range

WSTF - White Sands Test Facility

**APPENDIX E : [NOT USED]**

**APPENDIX F : Checklist items from PCI Data Security Standard**

Checklist items from PCI Data Security Standard 10MAR11DOE (Items that may require compensation in addition to NSSC controls are in red)

• Specific firewall and routing controls for credit card information and cardholder data • Isolation from non-business-related wireless networks • Unique and strong encryption keys for business-related wireless networks (WEP is prohibited) • Cardholder data storage only on internal network, separate from DMZ and untrusted networks • IP addresses used for storage and transmission of cardholder information must be filtered from disclosure to internet • Mobile computing devices that may be used to access cardholder data must be equipped with operational firewall, configured by administrator and not accessible by user • Card data storage must be minimized and in accordance with retention/disposal schedule • Card verification codes are not to be stored • Unless need-to-know, Primary Account Numbers must be masked from view, exposing no more than first 6 and last 4 digits • Card data must be encrypted at-rest (NASA requires FIPS 140-2 compliance for encryption algorithms) • Card data must be encrypted in-transit (NASA requires FIPS 140-2 compliance for encryption algorithms) • Least privilege must be extended to crypto key handlers and storage • Periodic changes are required for crypto keys • AntiVirus software is required to be installed and functionally current on all computers in the system handling credit card information • Patching must be maintained and current on all computers in the system handling credit card information • A risk assessment must be performed periodically on the system handling credit card information • Custom code reviews, testing, and configuration management are required • Internal vulnerability testing and application scanning are required • Least privilege and separation of duties must be extended to all users • All users must have unique identifiers • *Security training, including PCI-DSS, must be provided to all users* • Password controls must include periodic changes • Session time controls must be implemented • Physical access controls are required • Media disposal/destruction process is required • System logs must be regularly monitored & reviewed • System must have a transaction audit trail which is regularly reviewed • Computer time must be synchronized with a standard clock (NTP) • *Periodic external vulnerability scans are required* • *Annual penetration testing is required* • Intrusion detection system and regular monitoring are required • Policies must exist for use of technologies (acceptable use, mobile devices, remote access…) • Incident response processes, team, and annual response testing are required • Written agreements with third parties who handle credit card data are required.

[Note: Red text in original indicated by "*" in Cradle.]